CPH3145-TL-E Datasheet

https://www.DiGi-Electronics.com

DiGi Electronics Part Number	CPH3145-TL-E-DG
Manufacturer	onsemi
Manufacturer Product Number	CPH3145-TL-E
Description	TRANS PNP 50V 2A 3CPH
Detailed Description	Bipolar (BJT) Transistor PNP 50 V 2 A 420MHz 900 m W Surface Mount 3-CPH

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
CPH3145-TL-E	onsemi
Series:	Product Status:
-	Obsolete
Transistor Type:	Current - Collector (Ic) (Max):
PNP	2 A
Voltage - Collector Emitter Breakdown (Max):	Vce Saturation (Max) @ Ib, Ic:
50 V	330mV @ 50mA, 1A
Current - Collector Cutoff (Max):	DC Current Gain (hFE) (Min) @ Ic, Vce:
1µA (ICBO)	200 @ 100mA, 2V
Power - Max:	Frequency - Transition:
900 mW	420MHz
Operating Temperature:	Mounting Type:
150°C (TJ)	Surface Mount
Package / Case:	Supplier Device Package:
SC-96	3-CPH
Base Product Number:	
CPH3145	

Environmental & Export classification

RoHS Status:	Moisture Sensitivity Level (MSL):
ROHS3 Compliant	1 (Unlimited)
REACH Status:	ECCN:
REACH Unaffected	EAR99
HTSUS:	
8541.21.0075	

CPH3145/CPH3245

Low VCE (sat) Bipolar Transistor (PNP)NPN, (–)50V, (–)2A

ON Semiconductor®

www.onsemi.com

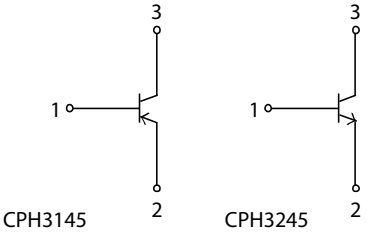
Features

- Adoption of MBIT Process
- Large Current Capacity
- Low Collector to Emitter Saturation Voltage
- High Speed Switching
- Ultrasmall Package Facilitates Miniaturization in End Products (mounting height : 0.9mm)
- High Allowable Power Dissipation

Typical Applications

- Relay Drivers
- Lamp Drivers
- Motor Drivers
- Flash

ELECTRICAL CONNECTION



1 : Base
2 : Emitter
3 : Collector

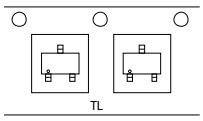
SPECIFICATIONS ( ) : CPH3145

ABSOLUTE MAXIMUM RATING at Ta = 25°C (Note 1)

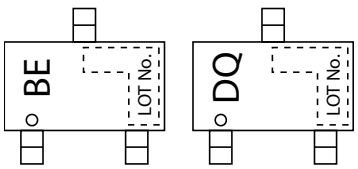
Parameter	Symbol	Value	Unit
Collector to Base Voltage	V_{CBO}	(–50)80	V
Collector to Emitter Voltage	V_{CES}	(–50)80	V
Collector to Emitter Voltage	V_{CEO}	(–)50	V
Emitter to Base Voltage	V_{EBO}	(–)6	V
Collector Current	I_C	(–)2	A
Collector Current (Pulse)	I_{CP}	(–)4	A
Base Current	I_B	(–)400	mA
Collector Dissipation When mounted on ceramic substrate ($600mm^2 \times 0.8mm$)	P_C	0.9	W
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	–55 to +150	°C

Note 1 : Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

PACKING TYPE : TL



MARKING



ORDERING INFORMATION

See detailed ordering and shipping information on page 5 of this data sheet.

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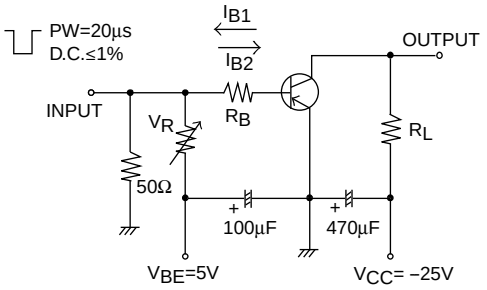
ELECTRICAL CHARACTERISTICS at Ta = 25°C (Note 2)

Parameter	Symbol	Conditions	Value			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=(–)40V, I_E=0A			(–)1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=(–)4V, I_C=0A			(–)1	μA
DC Current Gain	h_{FE}	V_{CE}=(–)2V, I_C=(–)100mA	200		560	
Gain-Bandwidth Product	f_T	V_{CE}=(–)10V, I_C=(–)300mA		420		MHz
Output Capacitance	Cob	V_{CB}=(–)10V, f=1MHz		(16)8		pF
Collector to Emitter Saturation Voltage	V_{CE}(sat)	I_C=(–)1A, I_B=(–)50mA		(–165)130	(–330)260	mV
Base to Emitter Saturation Voltage	V_{BE}(sat)			(–)0.9	(–)1.2	V
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=(–)10μA, I_E=0A	(–50)80			V
Collector to Emitter Breakdown Voltage	$V_{(BR)CES}$	I_C=(–)100μA, R_{BE}=0Ω	(–50)80			V
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=(–)1mA, R_{BE}=∞	(–)50			V
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=(–)10μA, I_C=0A	(–)6			V
Turn-ON Time	t_{on}	See specified Test Circuit		(35)35		ns
Storage Time	t_{stg}			(200)330		ns
Fall Time	t_f			(24)40		ns

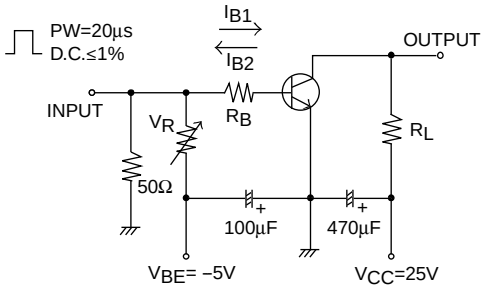
Note 2 : Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

Switching Time Test Circuit



I_C= –10I_{B1}=10I_{B2}= –0.7A

CPH3145



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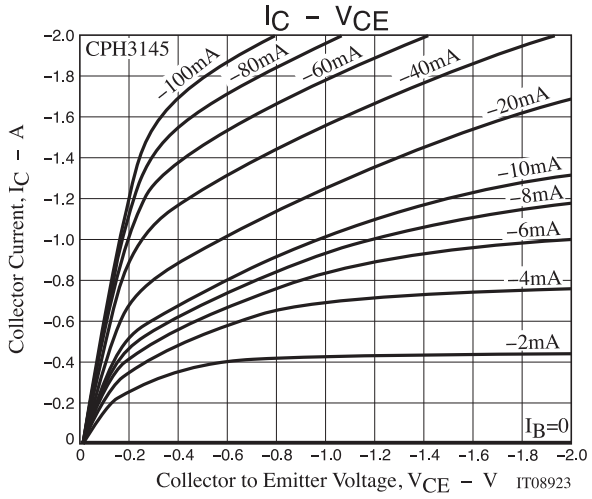

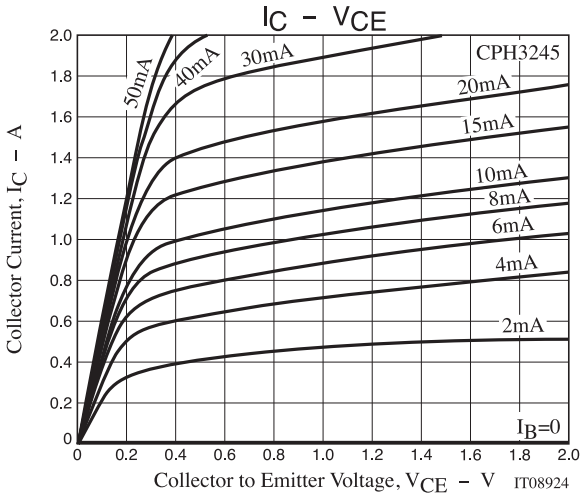

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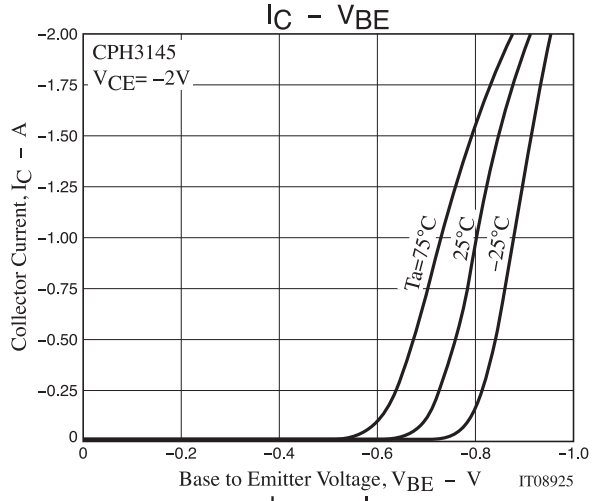

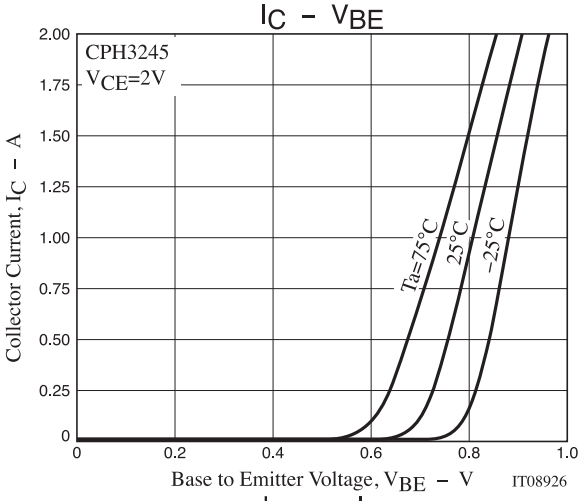

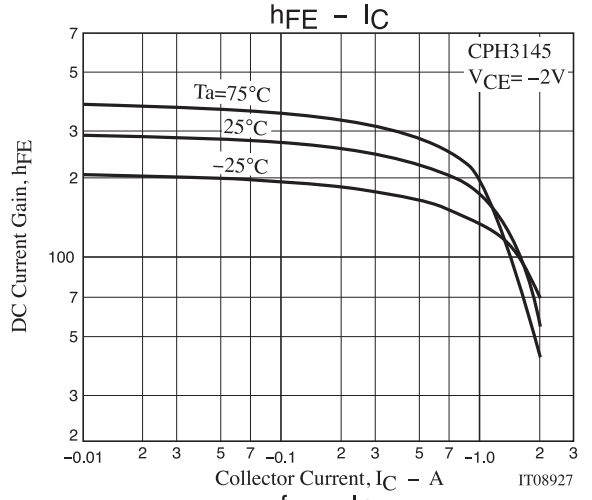

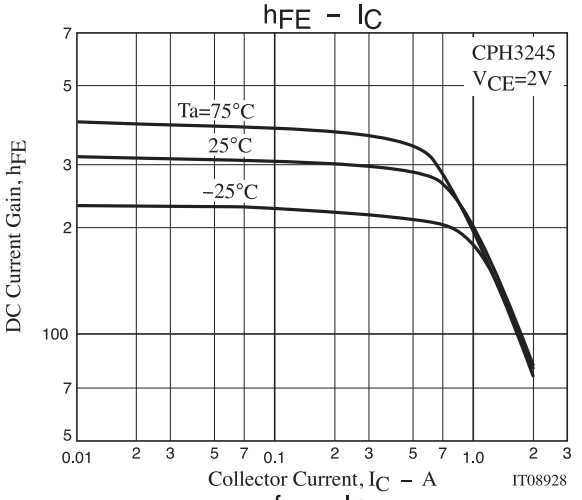

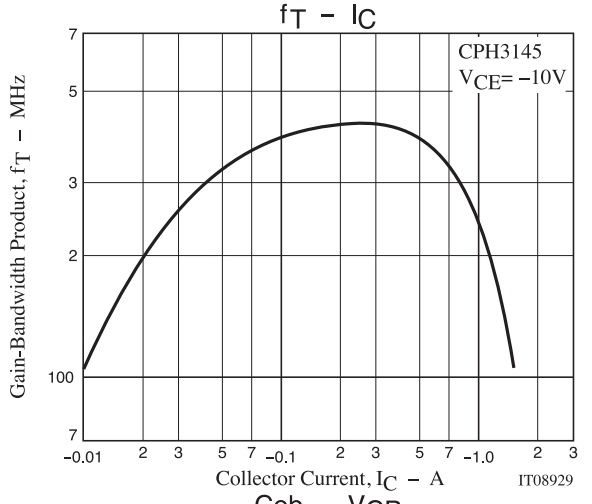

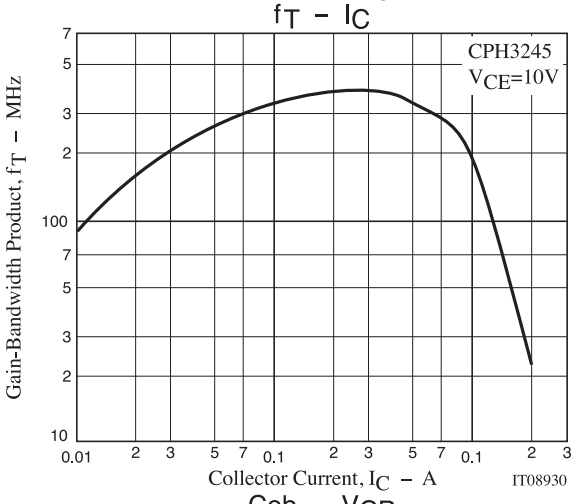

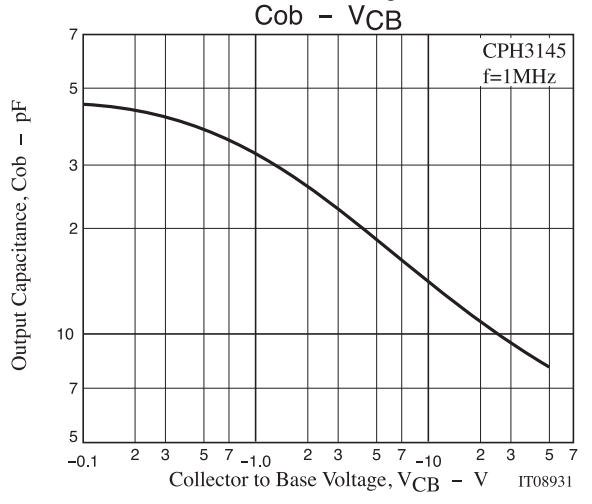

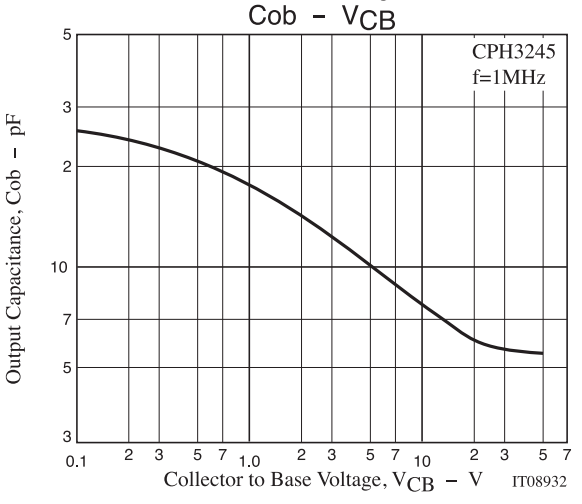

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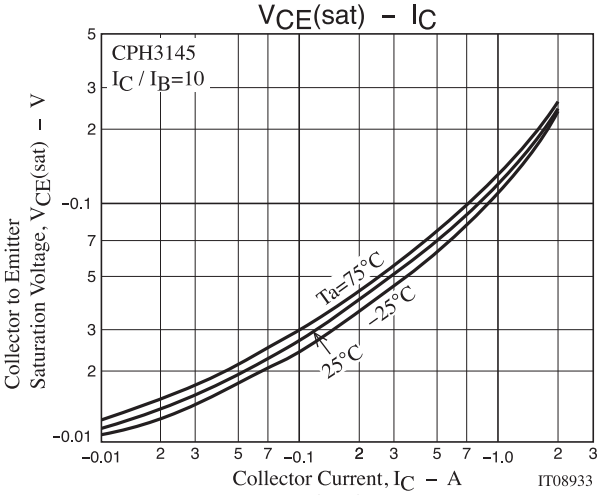
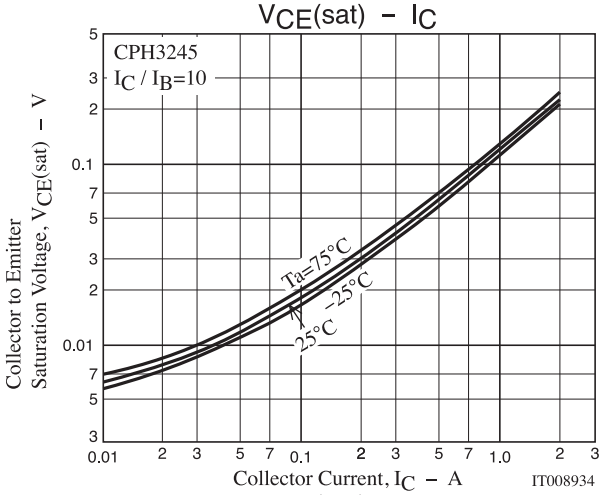
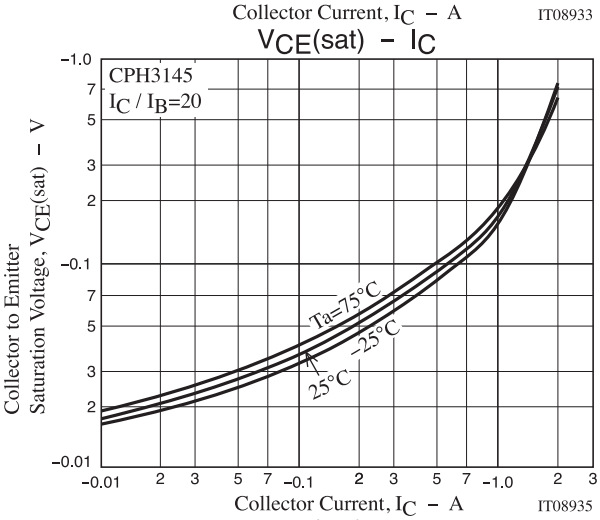
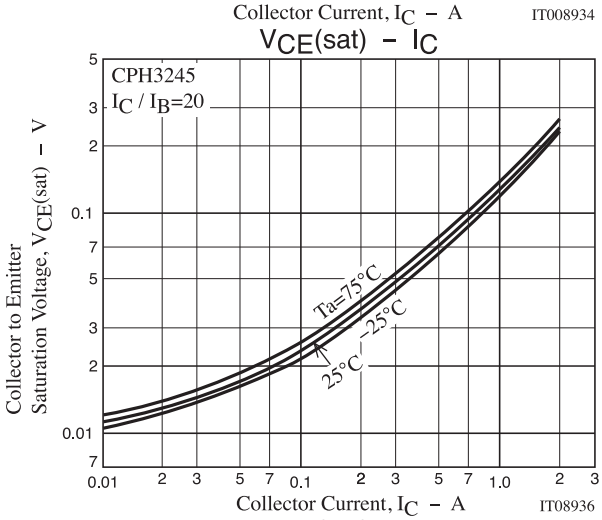
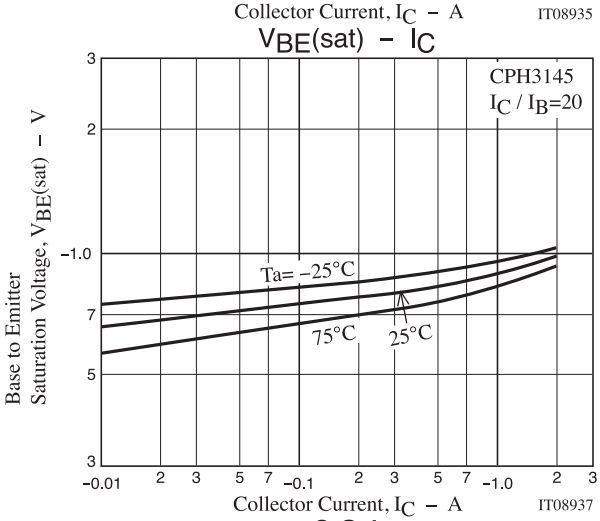
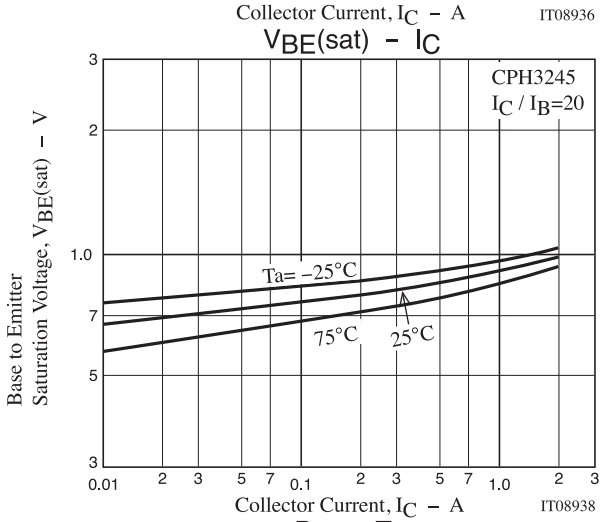


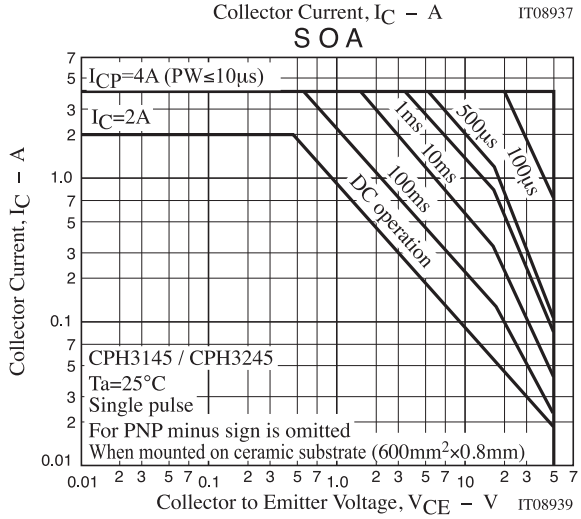


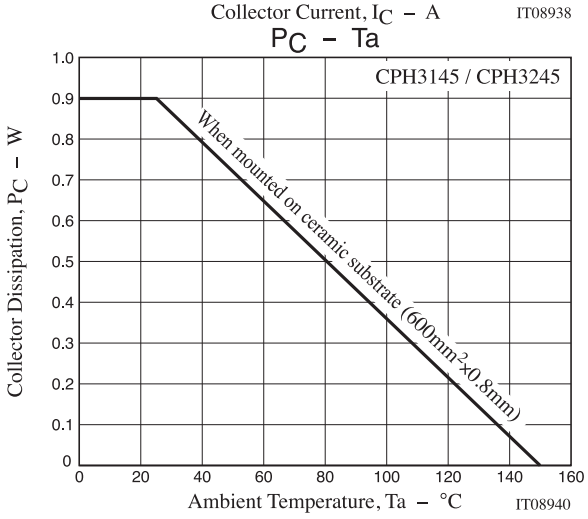










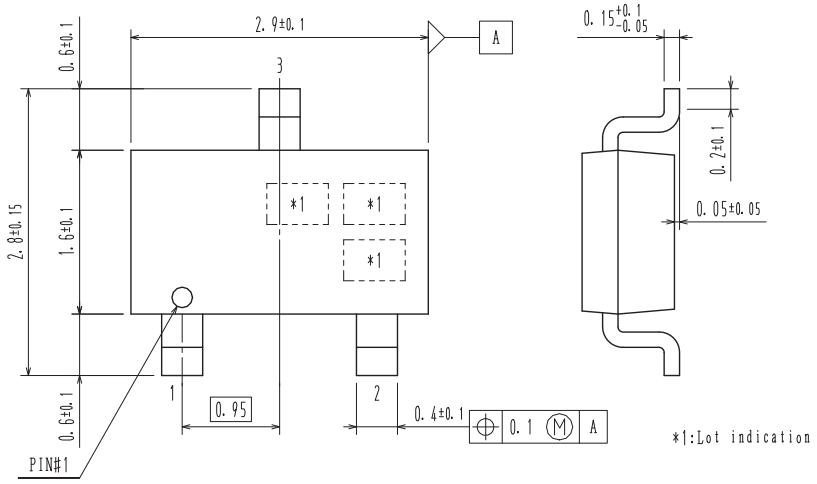


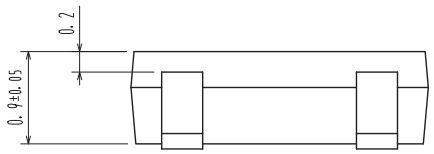
CPH3145/CPH3245

PACKAGE DIMENSIONS

unit : mm

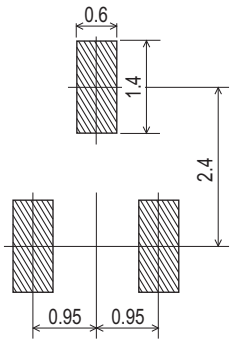
CPH3
CASE 318BA
ISSUE O





1 : Base
2 : Emitter
3 : Collector

Recommended Soldering Footprint



ORDERING INFORMATION

Device	Marking	Package	Shipping (Qty / Packing)
CPH3145-TL-E	BE	CPH3 SC-59, SOT-23, TO-236 (Pb-Free)	3,000 / Tape & Reel
CPH3245-TL-E	DQ		

† For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D. http://www.onsemi.com/pub_link/Collateral/BRD8011-D.PDF

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