2N6517-BP Datasheet

https://www.DiGi-Electronics.com

DiGi Electronics Part Number	2N6517-BP-DG
Manufacturer	Micro Commercial Co
Manufacturer Product Number	2N6517-BP
Description	TRANS NPN 350V 0.5A TO92
Detailed Description	Bipolar (BJT) Transistor NPN 350 V 500 mA 200MHz 625 mW Through Hole TO-92

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
2N6517-BP	Micro Commercial Co
Series:	Product Status:
-	Obsolete
Transistor Type:	Current - Collector (Ic) (Max):
NPN	500 mA
Voltage - Collector Emitter Breakdown (Max):	Vce Saturation (Max) @ Ib, Ic:
350 V	1V @ 5mA, 50mA
Current - Collector Cutoff (Max):	DC Current Gain (hFE) (Min) @ Ic, Vce:
50nA (ICBO)	30 @ 30mA, 10V
Power - Max:	Frequency - Transition:
625 mW	200MHz
Operating Temperature:	Mounting Type:
-55°C ~ 150°C (TJ)	Through Hole
Package / Case:	Supplier Device Package:
TO-226-3, TO-92-3 (TO-226AA)	TO-92
Base Product Number:	
2N6517	

Environmental & Export classification

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

Micro Commercial Components

Micro Commercial Components
20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

NPN
2N6515, 2N6517
PNP
2N6519, 2N6520

High Voltage
Transistor
625mW

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisure Sensitivity Level 1
- Through Hole Package
- 150 C Junction Temperature
- Voltage and Current are negative for PNP transistors
- Halogen free available upon request by adding suffix "-HF"

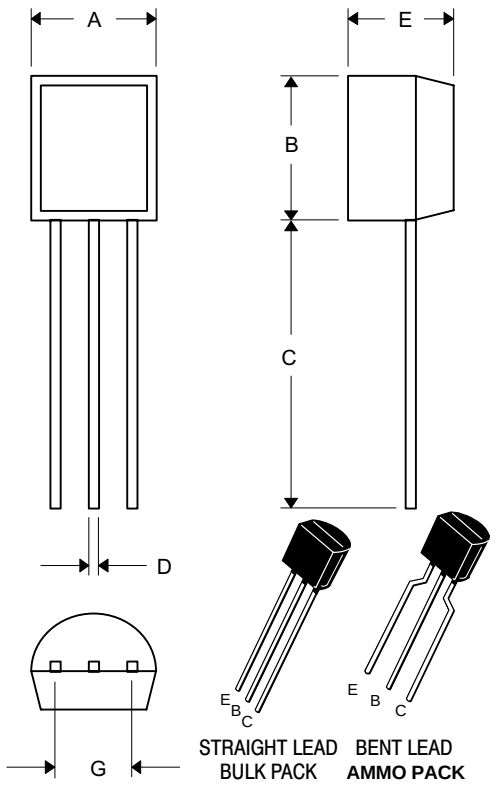
Mechanical Data

- Case: TO-92, Molded Plastic
- Polarity: indicated as above.

Maximum Ratings @ 25°C Unless Otherwise Specified

Charateristic	Symbol	Value	Unit
Collector-Emitter Voltage 2N6515 2N6519 2N6517, 2N6520	V_{CEO}	250 300 350	V
Collector-Base Voltage 2N6515 2N6519 2N6517, 2N6520	V_{CBO}	250 300 350	V
Emitter-Base Voltage 2N6515-6517 2N6519-6520	V_{EBO}	 6.0 5.0	V
Base Current	I_B	250	mA
Collector Current(DC)	I_C	500	mA
Power Dissipation@TA=25°C	P_d	0.625 5.0	W mW/°C
Power Dissipation@TC=25°C	P_d	1.5 12	W mW/°C
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	200	°C/W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	83.3	°C/W
Operating & Storage Temperature	T_j, T_{STG}	-55~150	°C

TO-92



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.175	.185	4.45	4.70	
B	.175	.185	4.45	4.70	
C	.500	---	12.70	---	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	Straight Lead
	.173	.220	4.40	5.60	Bent Lead

* For ammo packing detailed specification, click here to visit our website of product packaging for details.

NPN 2N6515 2N6517
PNP 2N6519 2N6520

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ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic		Symbol	Min	Max	Unit
OFF CHARACTERISTICS					
Collector–Emitter Breakdown Voltage[1]		$V_{(BR)CEO}$			Vdc
(I_C = 1.0 mAdc, I_B = 0)	2N6515		250	—	
	2N6519		300	—	
	2N6517, 2N6520		350	—	
Collector–Base Breakdown Voltage		$V_{(BR)CBO}$			Vdc
(I_C = 100 µAdc, I_E = 0)	2N6515		250	—	
	2N6519		300	—	
	2N6517, 2N6520		350	—	
Emitter–Base Breakdown Voltage		$V_{(BR)EBO}$			Vdc
(I_E = 10 µAdc, I_C = 0)	2N6515, 2N6517		6.0	—	
	2N6519, 2N6520		5.0	—	
Collector Cutoff Current		I_{CBO}			nAdc
(V_{CB} = 150 Vdc, I_E = 0)	2N6515		—	50	
(V_{CB} = 200 Vdc, I_E = 0)	2N6519		—	50	
(V_{CB} = 250 Vdc, I_E = 0)	2N6517, 2N6520		—	50	
Emitter Cutoff Current		I_{EBO}			nAdc
(V_{EB} = 5.0 Vdc, I_C = 0)	2N6515, 2N6517		—	50	
(V_{EB} = 4.0 Vdc, I_C = 0)	2N6519, 2N6520		—	50	
ON CHARACTERISTICS[1]					
DC Current Gain		h_{FE}			—
(I_C = 1.0 mAdc, V_{CE} = 10 Vdc)	2N6515		35	—	
	2N6519		30	—	
	2N6517, 2N6520		20	—	
(I_C = 10 mAdc, V_{CE} = 10 Vdc)	2N6515		50	—	
	2N6519		45	—	
	2N6517, 2N6520		30	—	
(I_C = 30 mAdc, V_{CE} = 10 Vdc)	2N6515		50	300	
	2N6519		45	270	
	2N6517, 2N6520		30	200	
(I_C = 50 mAdc, V_{CE} = 10 Vdc)	2N6515		45	220	
	2N6519		40	200	
	2N6517, 2N6520		20	200	
(I_C = 100 mAdc, V_{CE} = 10 Vdc)	2N6515		25	—	
	2N6519		20	—	
	2N6517, 2N6520		15	—	
Collector–Emitter Saturation Voltage		$V_{CE(sat)}$			Vdc
(I_C = 10 mAdc, I_B = 1.0 mAdc)			—	0.30	
(I_C = 20 mAdc, I_B = 2.0 mAdc)			—	0.35	
(I_C = 30 mAdc, I_B = 3.0 mAdc)			—	0.50	
(I_C = 50 mAdc, I_B = 5.0 mAdc)			—	1.0	
Base–Emitter Saturation Voltage		$V_{BE(sat)}$			Vdc
(I_C = 10 mAdc, I_B = 1.0 mAdc)			—	0.75	
(I_C = 20 mAdc, I_B = 2.0 mAdc)			—	0.85	
(I_C = 30 mAdc, I_B = 3.0 mAdc)			—	0.90	
Base–Emitter On Voltage		$V_{BE(on)}$	—	2.0	Vdc
(I_C = 100 mAdc, V_{CE} = 10 Vdc)					

1. Pulse Test: Pulse Width ≤ 300 µs, Duty Cycle ≤ 2.0%.

NPN 2N6515 2N6517
PNP 2N6519 2N6520

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ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted) (Continued)

Characteristic		Symbol	Min	Max	Unit
SMALL–SIGNAL CHARACTERISTICS					
Current–Gain — Bandwidth Product(1) (I_C = 10 mAdc, V_{CE} = 20 Vdc, f = 20 MHz)		f_T	40	200	MHz
Collector–Base Capacitance (V_{CB} = 20 Vdc, I_E = 0, f = 1.0 MHz)		C_{cb}	—	6.0	pF
Emitter–Base Capacitance (V_{EB} = 0.5 Vdc, I_C = 0, f = 1.0 MHz)	2N6515, 2N6517 2N6519, 2N6520	C_{eb}	— —	80 100	pF
SWITCHING CHARACTERISTICS					
Turn–On Time (V_{CC} = 100 Vdc, $V_{BE(off)}$ = 2.0 Vdc, I_C = 50 mAdc, I_{B1} = 10 mAdc)		t_{on}	—	200	µs
Turn–Off Time (V_{CC} = 100 Vdc, I_C = 50 mAdc, I_{B1} = I_{B2} = 10 mAdc)		t_{off}	—	3.5	µs

1. Pulse Test: Pulse Width ≤ 300 µs, Duty Cycle ≤ 2.0%.

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PNP 2N6519 2N6520

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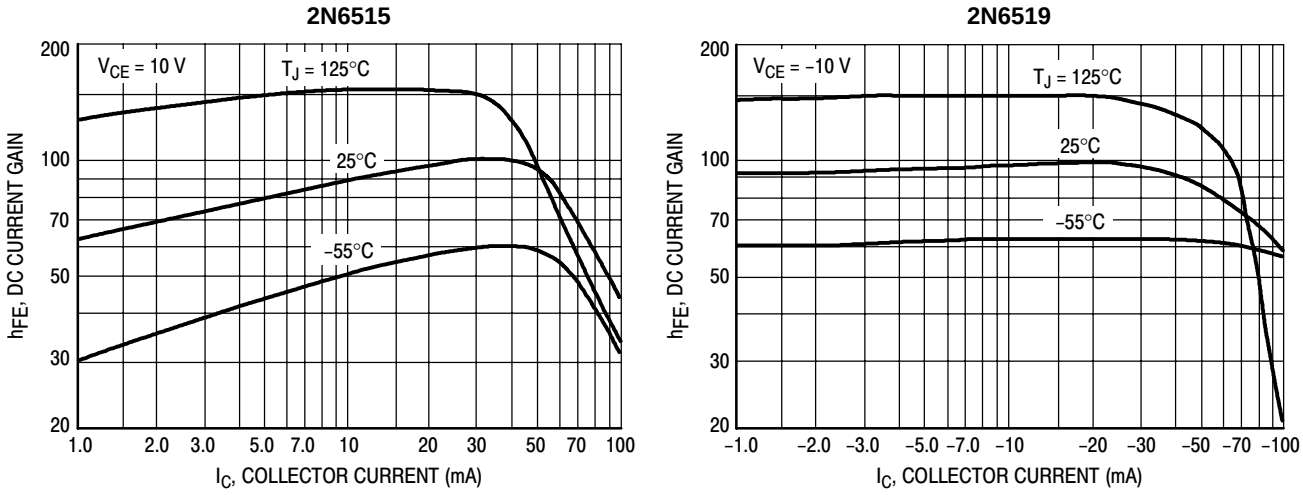

Figure 1. DC Current Gain

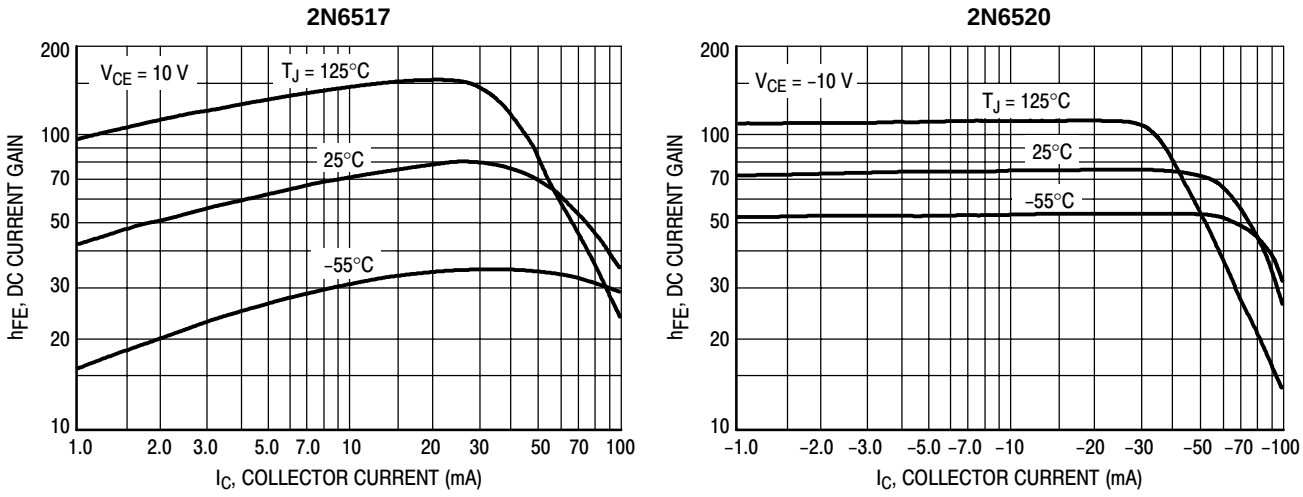

Figure 2. DC Current Gain

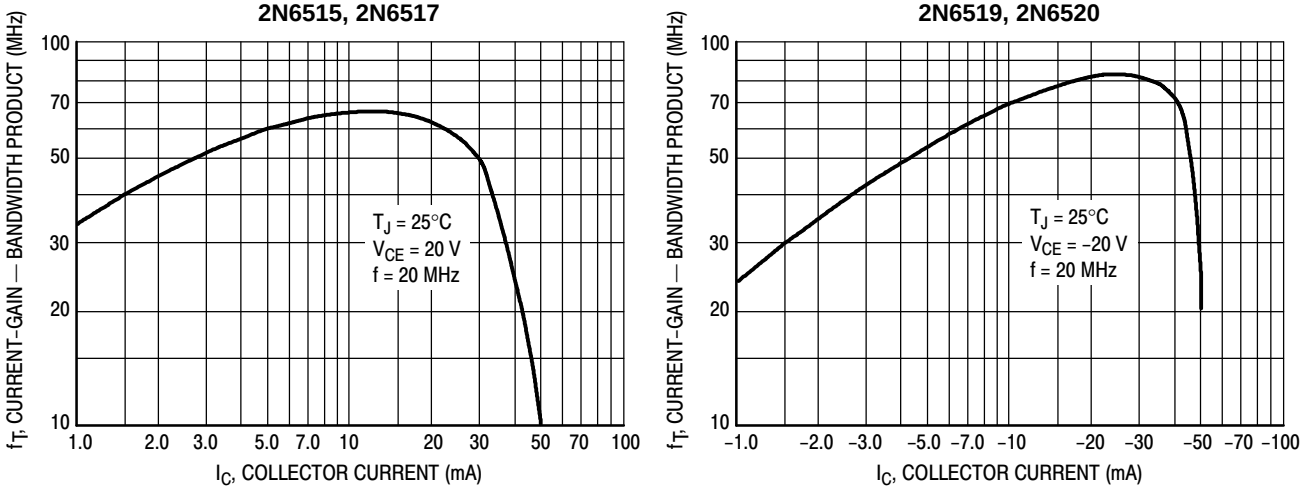

Figure 3. Current–Gain — Bandwidth Product

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PNP 2N6519 2N6520

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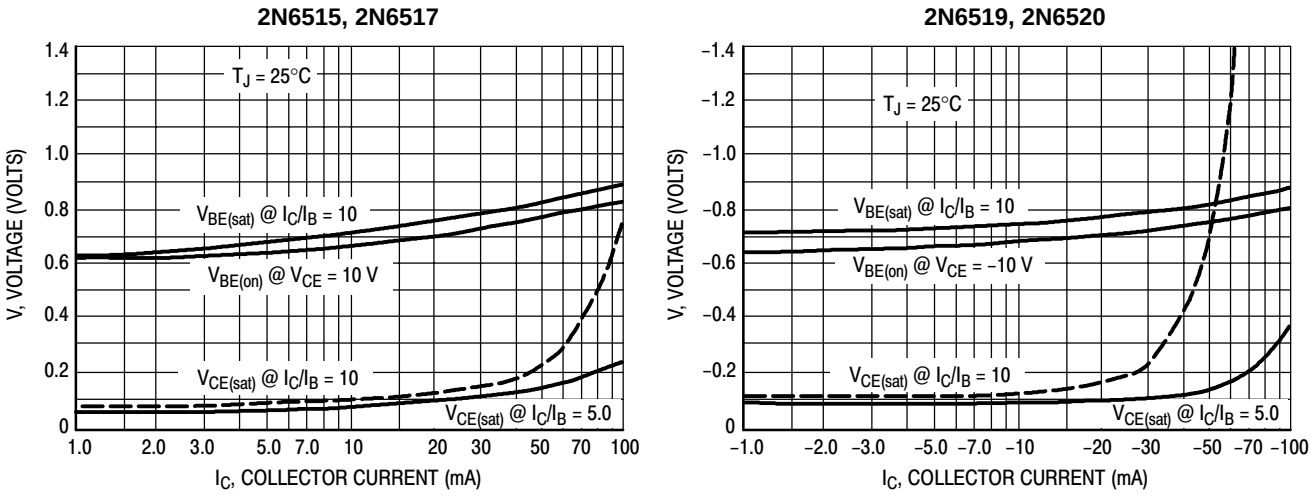

Figure 4. “On” Voltages

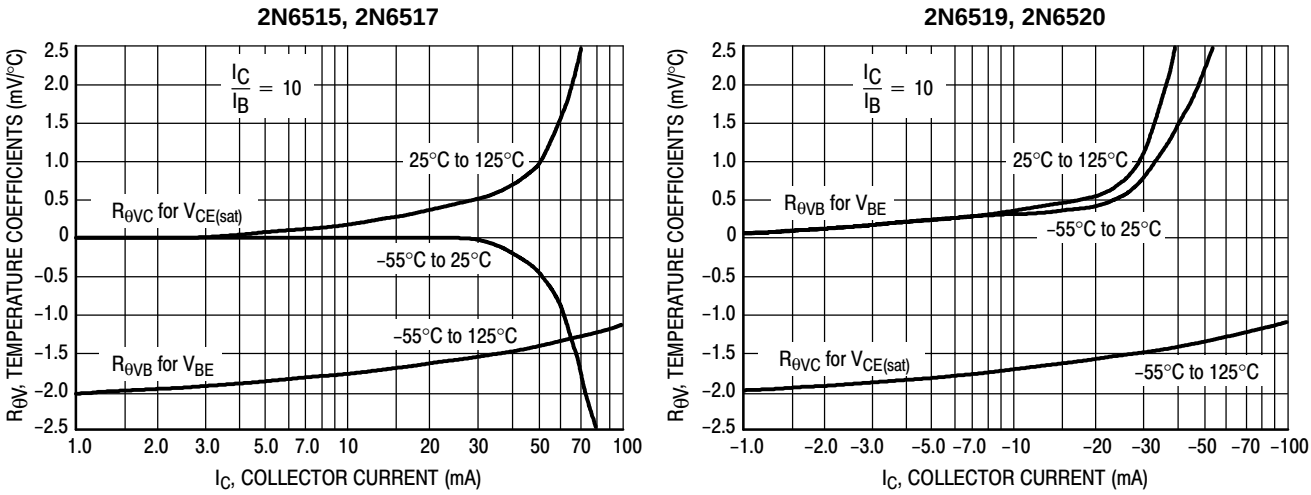

Figure 5. Temperature Coefficients

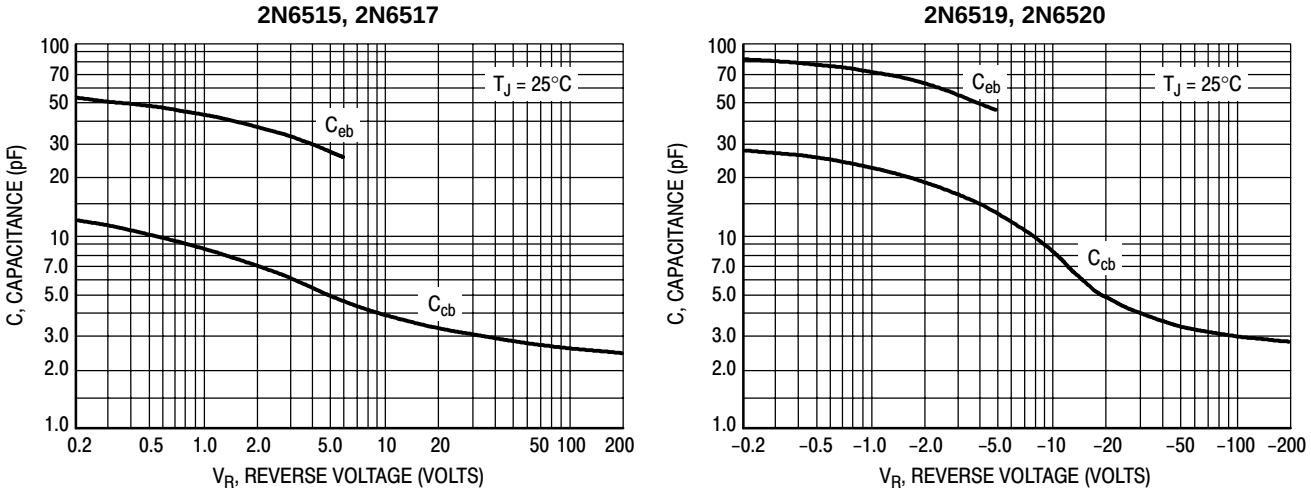

Figure 6. Capacitance

NPN 2N6515 2N6517
PNP 2N6519 2N6520

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NPN **PNP**

2N6515, 2N6517 **2N6519, 2N6520**

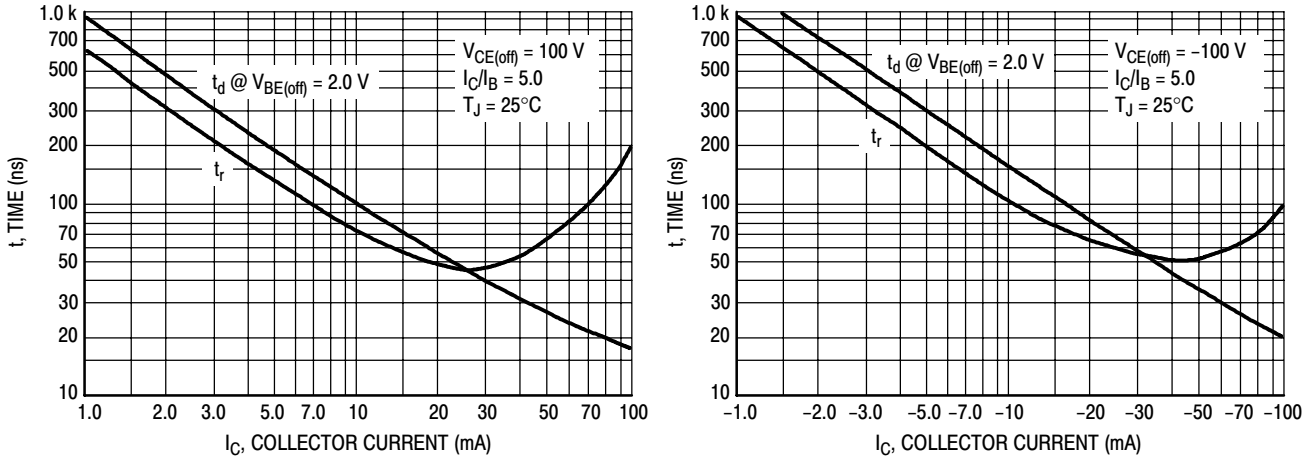

Figure 7. Turn–On Time

2N6515, 2N6517 **2N6519, 2N6520**

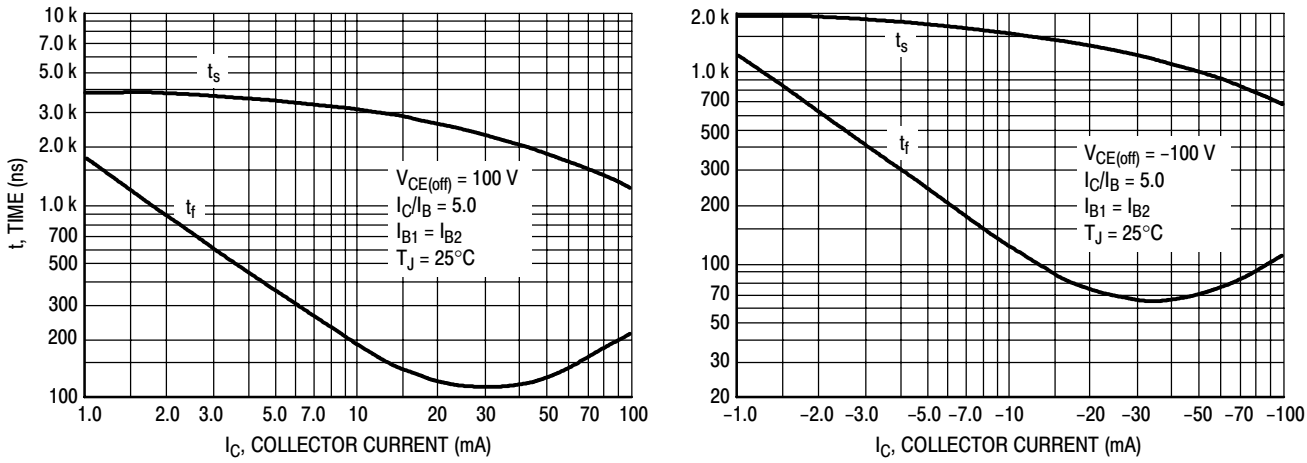

Figure 8. Turn–Off Time

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Ordering Information :

Device	Packing
Part Number-AP	Ammo Packing: 20Kpcs/Carton
Part Number-BP	Bulk: 100Kpcs/Carton

Note : Adding "-HF" suffix for halogen free, eg. Part Number-BP-HF

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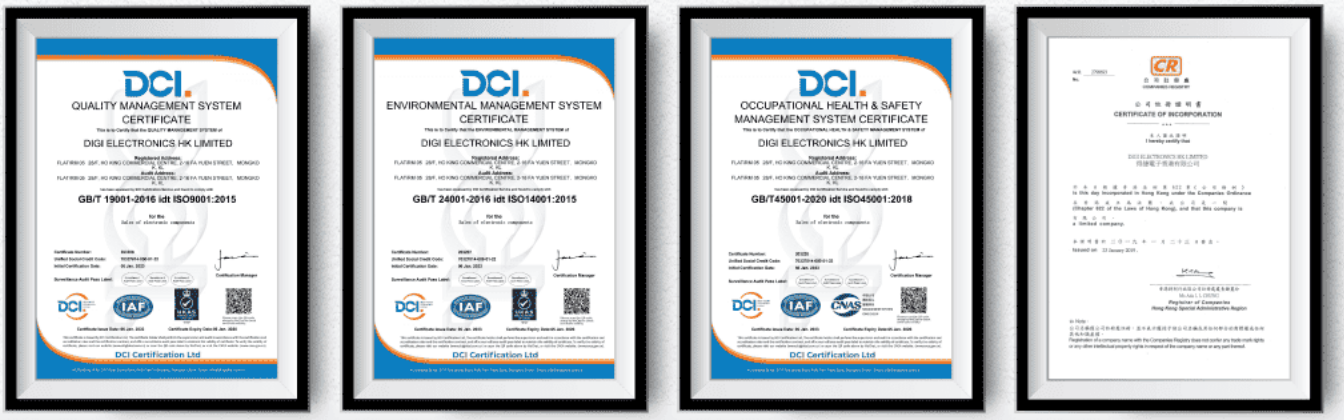

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