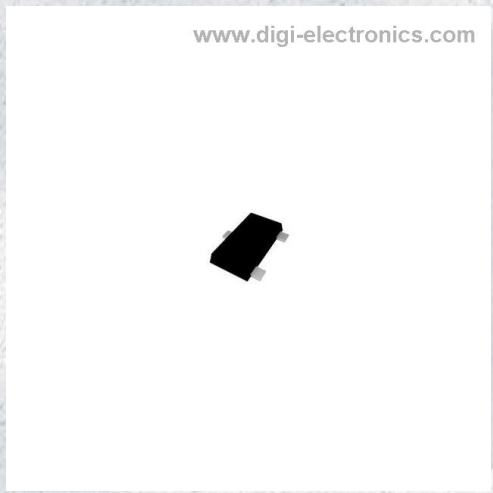
BC846AM3-TP Datasheet



https://www.DiGi-Electronics.com

DiGi Electronics Part Number	BC846AM3-TP-DG
Manufacturer	Micro Commercial Co
Manufacturer Product Number	BC846AM3-TP
Description	Interface
Detailed Description	Bipolar (BJT) Transistor NPN 65 V 100 mA 100MHz 2 65 mW Surface Mount SOT-723

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
BC846AM3-TP	Micro Commercial Co
Series:	Product Status:
-	Active
Transistor Type:	Current - Collector (Ic) (Max):
NPN	100 mA
Voltage - Collector Emitter Breakdown (Max):	Vce Saturation (Max) @ Ib, Ic:
65 V	600mV @ 5mA, 100mA
Current - Collector Cutoff (Max):	DC Current Gain (hFE) (Min) @ Ic, Vce:
1mA	200 @ 2mA, 5V
Power - Max:	Frequency - Transition:
265 mW	100MHz
Operating Temperature:	Mounting Type:
-55°C ~ 150°C (TJ)	Surface Mount
Package / Case:	Supplier Device Package:
SOT-723	SOT-723
Base Product Number:	
BC846	

Environmental & Export classification

REACH Status:	ECCN:
REACH Unaffected	EAR99
HTSUS:	
8541.21.0075	

Micro Commercial Components

BC846AM3 THRU BC848CM3

Features

- Halogen Free. “Green” Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

NPN Plastic-Encapsulate Transistors

Maximum Ratings @ 25°C Unless Otherwise Specified

- Operating Junction Temperature Range: -55℃ to +150℃
- Storage Temperature Range: -55℃ to +150℃
- Maximum Thermal Resistance:472℃/W Junction to Ambient(Note 2)

Parameter	Symbol	Rating	Unit
Collector-Base Voltage BC846AM3-BC846BM3 BC847AM3-BC847CM3 BC848AM3-BC848CM3	V_{CBO}	 80 50 30	V
Collector-Emitter Voltage BC846AM3-BC846BM3 BC847AM3-BC847CM3 BC848AM3-BC848CM3	V_{CEO}	 65 45 30	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	100	mA
Peak Base Current(Note3)	I_{BM}	200	mA
Collector Power Dissipation@T_A=25°C(Note2)	P_C	265	mW

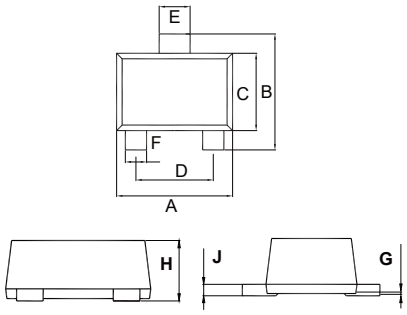
Note:

1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

2. Device Mounted on FR−5: 1.0 X 0.75 X 0.062 inch.

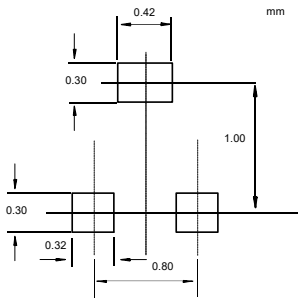
3. Single pulse; tp<1 ms.

SOT-723

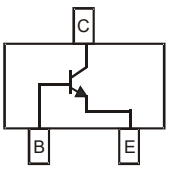


DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.043	0.051	1.10	1.30	
B	0.043	0.051	1.10	1.30	
C	0.028	0.035	0.70	0.90	
D	0.031		0.80		TYP.
E	0.009	0.017	0.22	0.42	
F	0.005	0.013	0.12	0.32	
G	0.000	0.002	0.00	0.05	
H	0.017	0.021	0.43	0.54	
J	0.003	0.006	0.08	0.15	

Suggested Solder Pad Layout



Internal Structure



Marking:
BC846AM3:1A; BC846BM3:1B;
BC847AM3:1E; BC847BM3:1F; BC847CM3:1G;
BC848AM3:1J; BC848BM3:1K; BC848CM3:1L;

Electrical Characteristics @ T_A=25°C Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage						
BC846AM3-BC846BM3	$V_{(BR)CBO}$	80			V	I_C=10μA, I_E=0
BC847AM3-BC847CM3		50				
BC848AM3-BC848CM3		30				
Collector-Emitter Breakdown Voltage						
BC846AM3-BC846BM3	$V_{(BR)CEO}$	65			V	I_C=10mA, I_B=0
BC847AM3-BC847CM3		45				
BC848AM3-BC848CM3		30				
Emitter-Base Breakdown Voltage						
BC846AM3-BC846BM3	$V_{(BR)EBO}$	6			V	I_E=10μA, I_C=0
BC847AM3-BC847CM3		6				
BC848AM3-BC848CM3		5				
Collector Cut-off Current	I_{CBO}			15	nA	V_{CB}=30V, I_E=0
Emitter Cutoff Current	I_{EBO}			100	nA	V_{EB}=5V, I_C=0
Emitter Cutoff Current	I_{CEO}			1	mA	V_{CE}=30V, I_B=0
DC Current Gain						
BC846AM3/BC847AM3/BC848AM3	$h_{FE(1)}$		110			V_{CE}=5V, I_C=10μA
BC846BM3/BC847BM3/BC848BM3			250			
BC847CM3/BC848CM3			480			
DC Current Gain						
BC846AM3/BC847AM3/BC848AM3	$h_{FE(2)}$	110		220		V_{CE}=5V, I_C=2mA
BC846BM3/BC847BM3/BC848BM3		200		450		
BC847CM3/BC848CM3		420		800		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		0.09	0.3	V	I_C=10mA, I_B=0.5mA
			0.2	0.6		I_C=100mA, I_B=5mA
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		0.7	0.9	V	I_C=10mA, I_B=0.5mA
			0.9	1.1		I_C=100mA, I_B=5mA
Base-Emitter On Voltage	$V_{BE(on)}$	0.52	0.66	0.7	V	V_{CE}=5V, I_C=2mA
				0.77		V_{CE}=5V, I_C=10mA
Transition Frequency	f_T	100			MHz	V_{CE}=5V, I_C=10mA, f=100MHz

Curve Characteristics

Fig. 1 - Static Characteristics

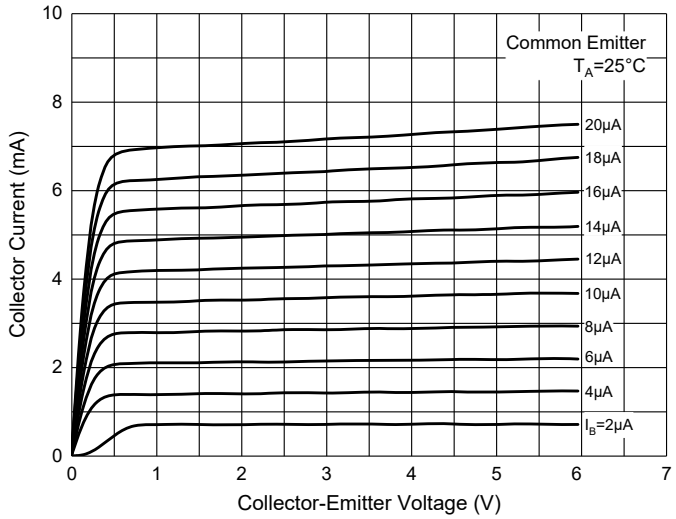


Fig. 2 - DC Current Gain Characteristics

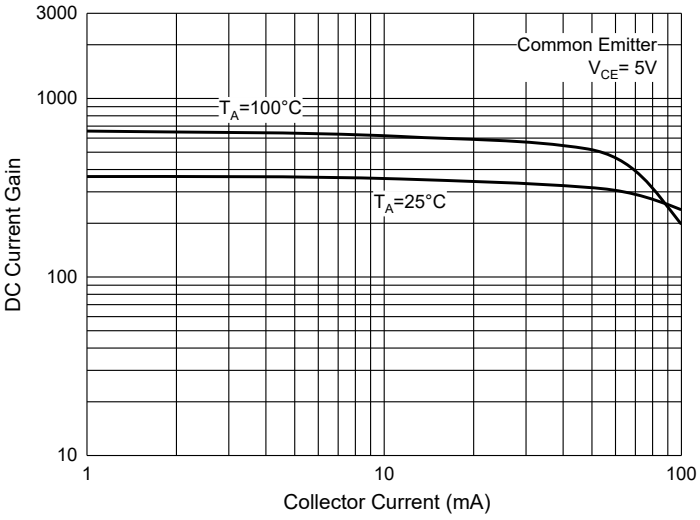


Fig. 3 - Base-Emitter Saturation Voltage Characteristics

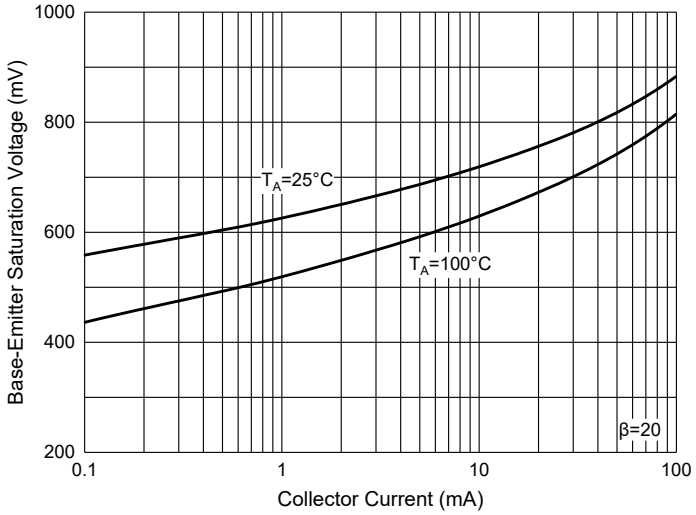


Fig. 4 - Collector-Emitter Saturation Voltage Characteristics

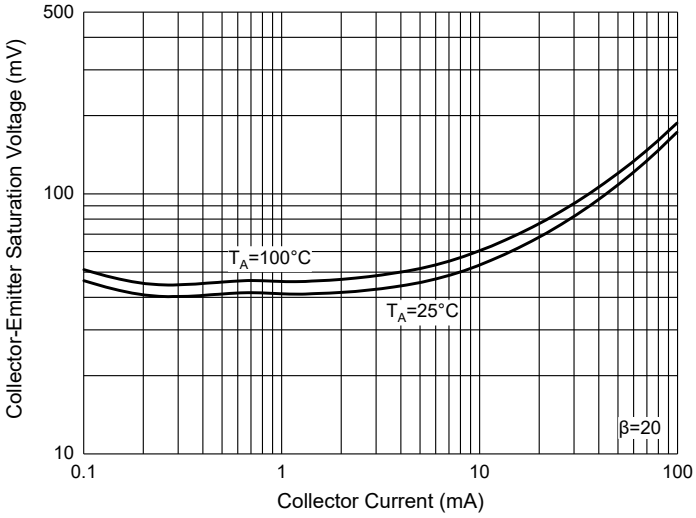


Fig. 5 - Base-Emitter Voltage Characteristics

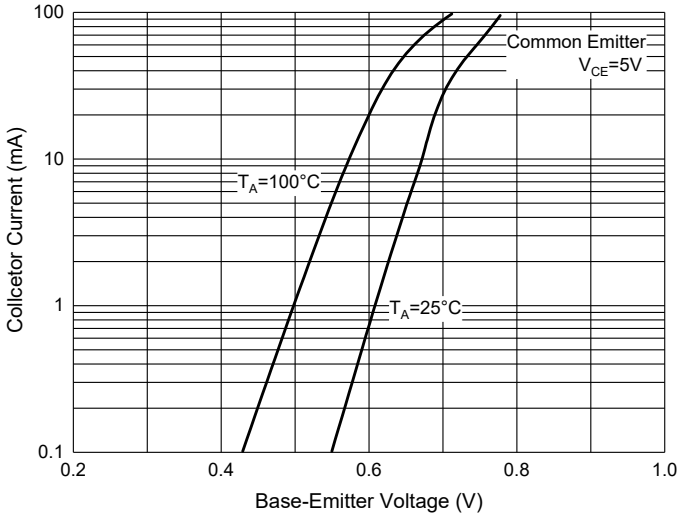
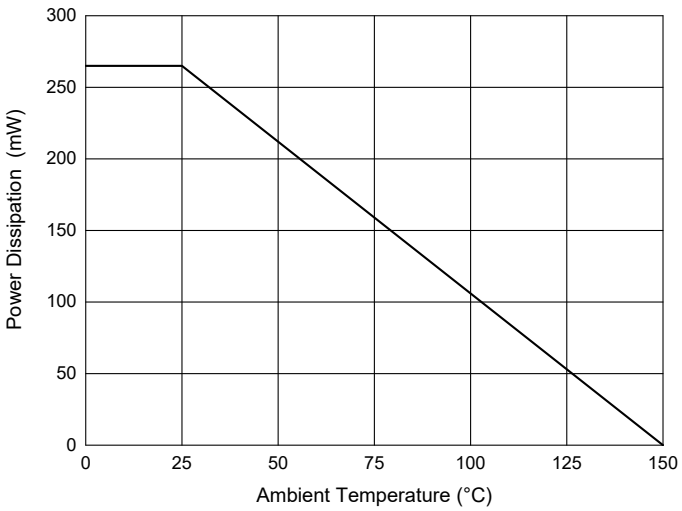


Fig. 6 - Power Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 8Kpcs/Reel

OUR CERTIFICATE

DiGi provide top-quality products and perfect service for customer worldwide through standardization, technological innovation and continuous improvement. DiGi through third-party certification, we striciy control the quality of products and services. Welcome your RFQ to Email: Info@DiGi-Electronics.com

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.