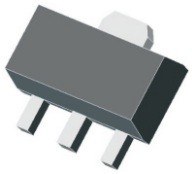
General Purpose Transistor

2SC2873-G Series (NPN)

RoHS Device

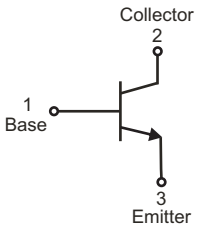


Features

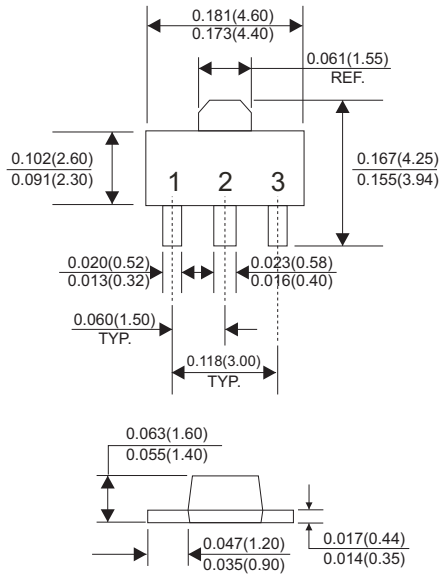
- Small flat package
- High speed switching time.
- Low collector-emitter saturation voltage.

Circuit Diagram

1 : BASE
2 : COLLECTOR
3 : EMITTER



SOT-89-3L



Dimensions in inches and (millimeter)

Maximum Ratings (at TA=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base voltage	V_{CBO}	50	V
Collector-Emitter voltage	V_{CEO}	50	V
Emitter-Base voltage	V_{EBO}	5	V
Collector current	I_C	2	A
Collector power dissipation	P_D	500	mW
Thermal resistance from junction to ambient	$R_{\theta JA}$	250	°C/W
Junction temperature	T_J	150	°C
Storage temperature	Tstg	-55~+150	°C

Electrical Characteristics (at T_A=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Collector-Base breakdown voltage	I_C =100μA , I_E=0	$V_{(BR)CBO}$	50			V
Collector-Emitter breakdown voltage	I_C =1mA , I_B=0	$V_{(BR)CEO}$	50			V
Emitter-Base breakdown voltage	I_E =100μA , I_C=0	$V_{(BR)EBO}$	5			V
Collector cut-off current	V_{CB}=50V , I_E=0	I_{CBO}			0.1	μA
Emitter cut-off current	V_{EB}=5V , I_C=0	I_{EBO}			0.1	μA
DC current gain	V_{CE}=2V , I_C=0.5mA	$h_{FE(1)}$	70		240	
	V_{CE}=2V , I_C=2mA	$h_{FE(2)}$	20			
Collector-Emitter saturation voltage	I_C=1A , I_B=50mA	V_{CE}(sat)			0.5	V
Base-Emitter saturation voltage	I_C=1A , I_B=50mA	V_{BE}(sat)			1.2	V
Transition frequency	V_{CE}=2V , I_C=0.5A	f_T		120		MHz
Collector output capacitance	V_{CB}=10V, IE=0 , F=1MHZ	Cob		30		pF

Classification Of hFE

Part No.	2SC2873O-G	2SC2873Y-G
Range	70-140	120-240
Marking	MO	MY

RATING AND CHARACTERISTIC CURVES (2SC2873-G)

Fig.1 - Static Characteristic

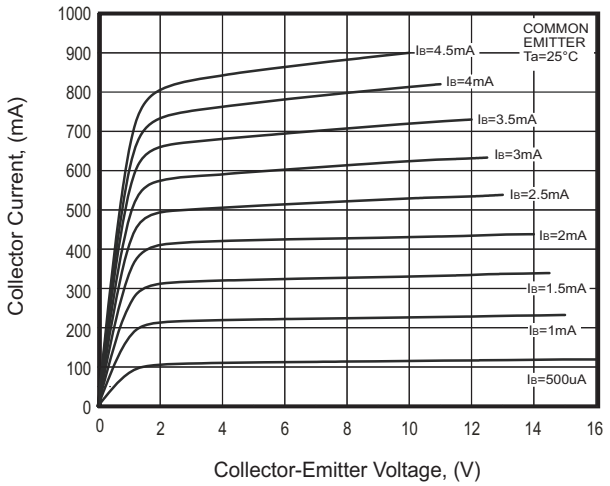


Fig.2 - h_{FE}— I_C

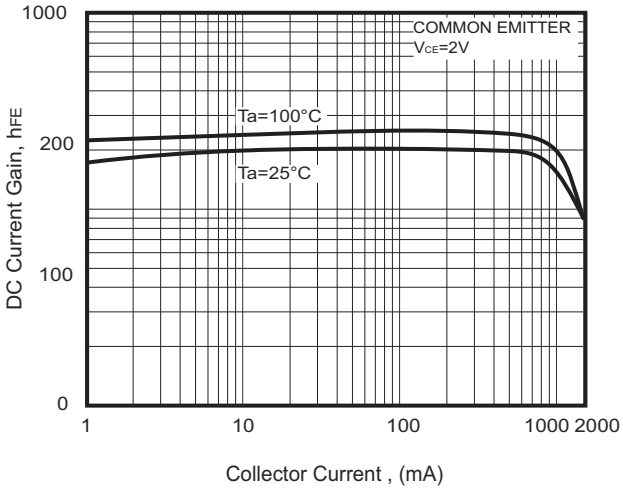


Fig.3 - V_{BEsat} — I_C

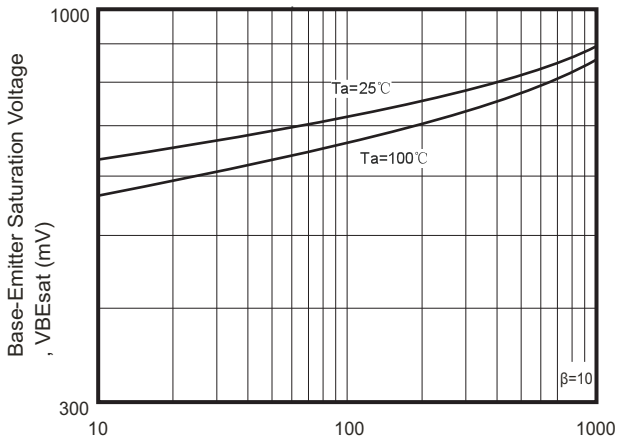


Fig.4- V_{CEsat} — I_C

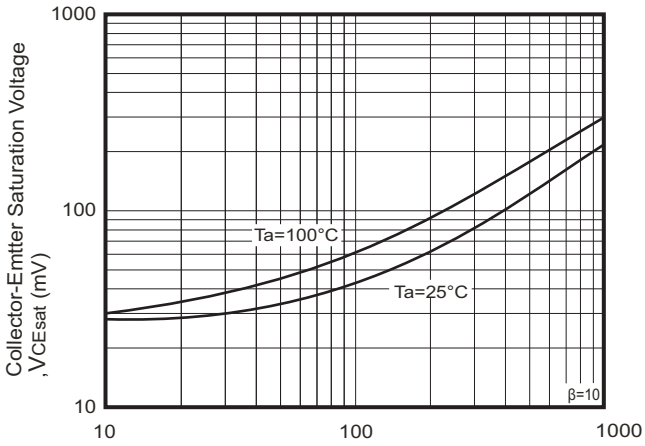


Fig.5 - I_C — V_{BE}

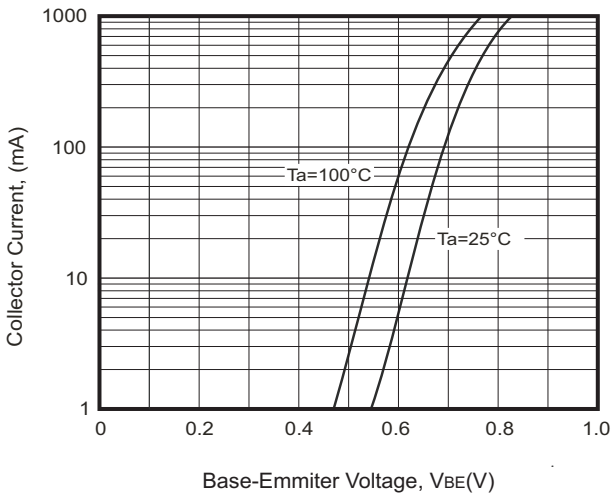
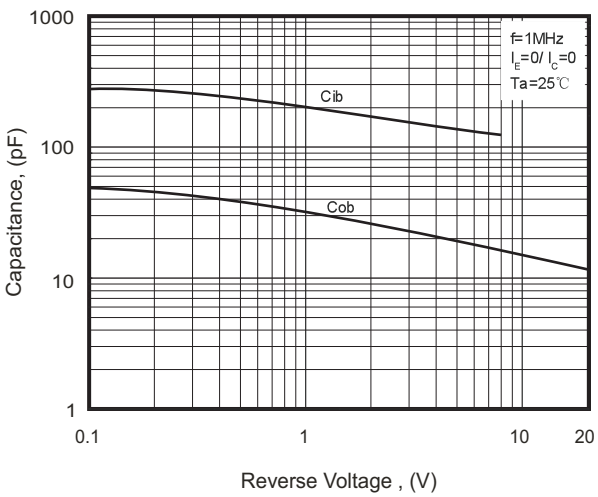
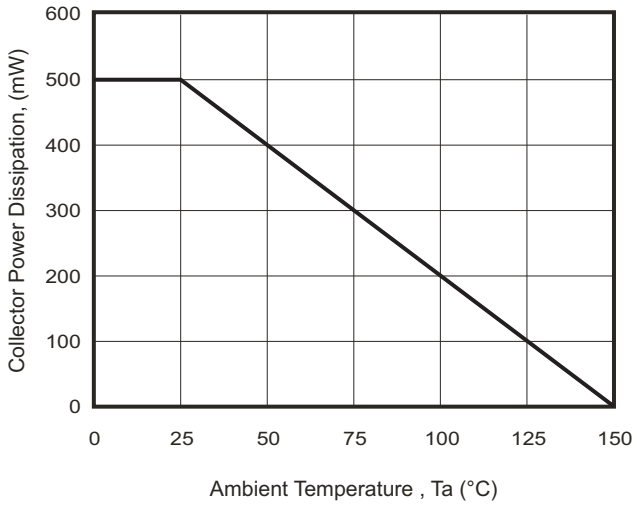


Fig.6 - C_{ob}/C_{ib} — V_{CB}/V_{EB}



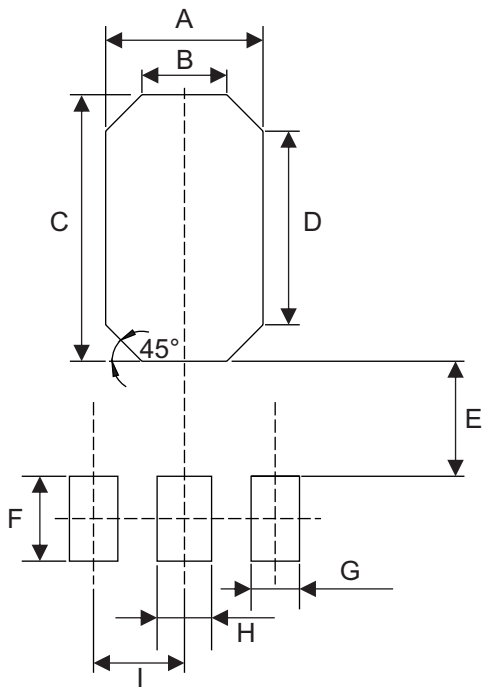
RATING AND CHARACTERISTIC CURVES (2SC2873-G)

Fig.7 - P_C — Ta



Suggested PAD Layout

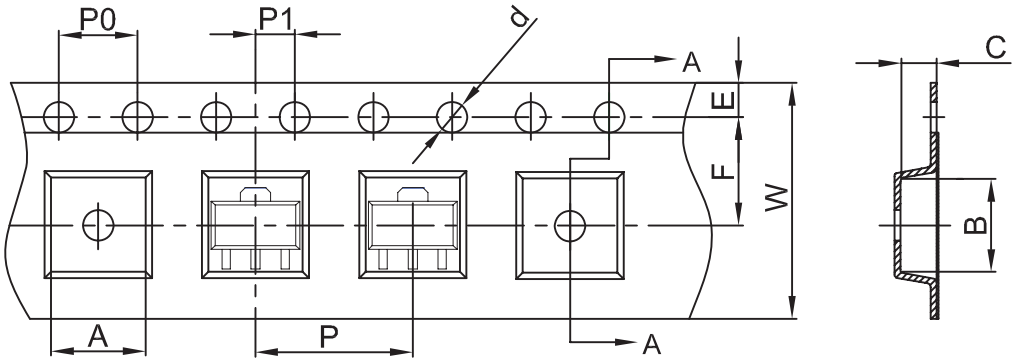
SIZE	SOT-89-3L	
	(mm)	(inch)
A	2.60	0.102
B	1.40	0.055
C	4.40	0.173
D	3.20	0.126
E	1.90	0.075
F	1.40	0.055
G	0.80	0.032
H	0.90	0.035
I	1.50	0.059

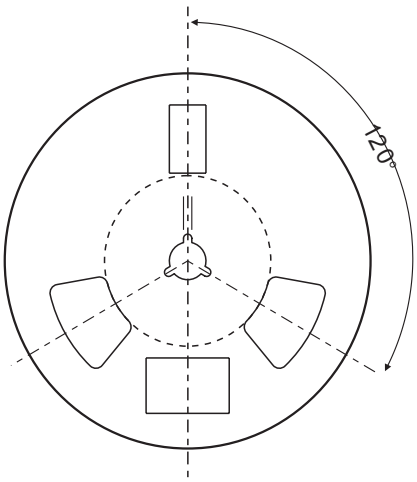


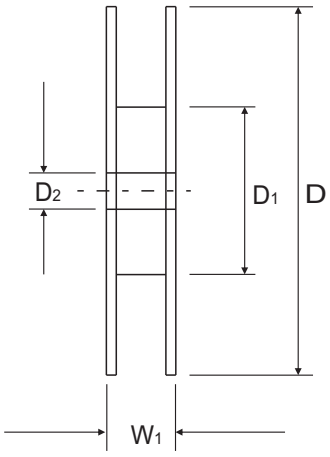
Standard Packaging

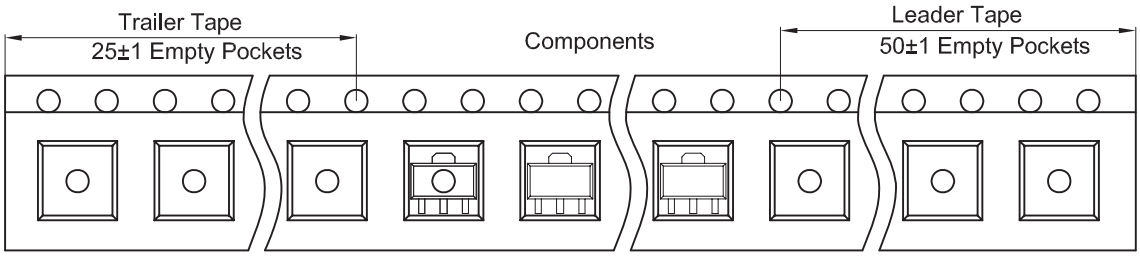
Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOT-89-3L	1,000	7

Reel Taping Specification









	SYMBOL	A	B	C	d	D	D1	D2
SOT-89-3L	(mm)	4.85 ± 0.10	4.45 ± 0.10	1.85 ± 0.10	1.50 + 0.10	180 ± 2.00	60.00 ± 1.00	R32.00 ± 1.00
	(inch)	0.191 ± 0.004	0.175± 0.004	0.073 ± 0.004	0.059 + 0.004	7.087 ± 0.079	2.362 ± 0.039	1.260 ± 0.039

	SYMBOL	E	F	P	P0	P1	W	W1
SOT-89-3L	(mm)	1.75 ± 0.10	5.50 ± 0.10	8.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	12.00 + 0.30 / - 0.10	16.50 ± 1.00
	(inch)	0.069 ± 0.004	0.217 ± 0.004	0.315 ± 0.004	0.158 ± 0.004	0.079 ± 0.004	0.472 + 0.012 / - 0.004	0.650 ± 0.039