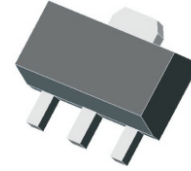


## 2SC2873-G Series (NPN) RoHS Device

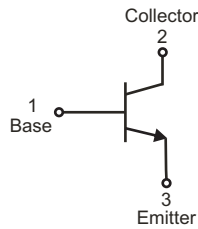


### Features

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

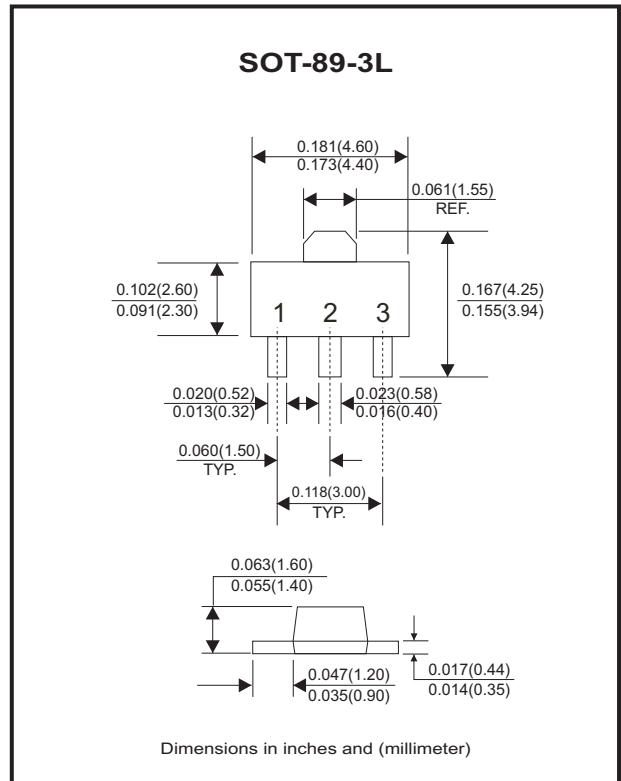
### Circuit Diagram

1 : BASE  
2 : COLLECTOR  
3 : EMITTER



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

Parameter	Symbol	Value	Unit
Collector-Base voltage	V <sub>CB0</sub>	50	V
Collector-Emitter voltage	V <sub>CEO</sub>	50	V
Emitter-Base voltage	V <sub>EBO</sub>	5	V
Collector current	I <sub>C</sub>	2	A
Collector power dissipation	P <sub>D</sub>	500	mW
Thermal resistance from junction to ambient	R <sub>θJA</sub>	250	°C/W
Junction temperature	T <sub>J</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55~+150	°C



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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Collector-Base breakdown voltage	I <sub>C</sub> = 100μA, I <sub>E</sub> = 0	V <sub>(BR)CBO</sub>	50			V
Collector-Emitter breakdown voltage	I <sub>C</sub> = 1mA, I <sub>B</sub> = 0	V <sub>(BR)CEO</sub>	50			V
Emitter-Base breakdown voltage	I <sub>E</sub> = 100μA, I <sub>C</sub> = 0	V <sub>(BR)EBO</sub>	5			V
Collector cut-off current	V <sub>CB</sub> = 50V, I <sub>E</sub> = 0	I <sub>CBO</sub>			0.1	μA
Emitter cut-off current	V <sub>EB</sub> = 5V, I <sub>C</sub> = 0	I <sub>EBO</sub>			0.1	μA
DC current gain	V <sub>CE</sub> = 2V, I <sub>C</sub> = 0.5mA	h <sub>FE(1)</sub>	70		240	
	V <sub>CE</sub> = 2V, I <sub>C</sub> = 2mA	h <sub>FE(2)</sub>	20			
Collector-Emitter saturation voltage	I <sub>C</sub> = 1A, I <sub>B</sub> = 50mA	V <sub>CE(sat)</sub>			0.5	V
Base-Emitter saturation voltage	I <sub>C</sub> = 1A, I <sub>B</sub> = 50mA	V <sub>BE(sat)</sub>			1.2	V
Transition frequency	V <sub>CE</sub> = 2V, I <sub>C</sub> = 0.5A	f <sub>T</sub>		120		MHz
Collector output capacitance	V <sub>CB</sub> = 10V, I <sub>E</sub> = 0, F = 1MHz	C <sub>ob</sub>		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

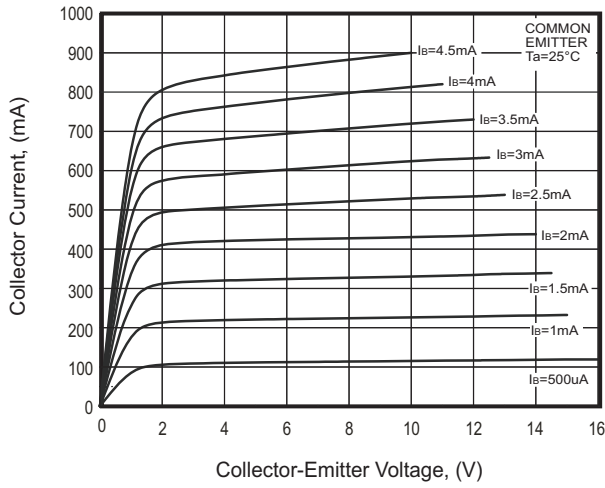


Fig.2 -  $h_{FE} - I_c$

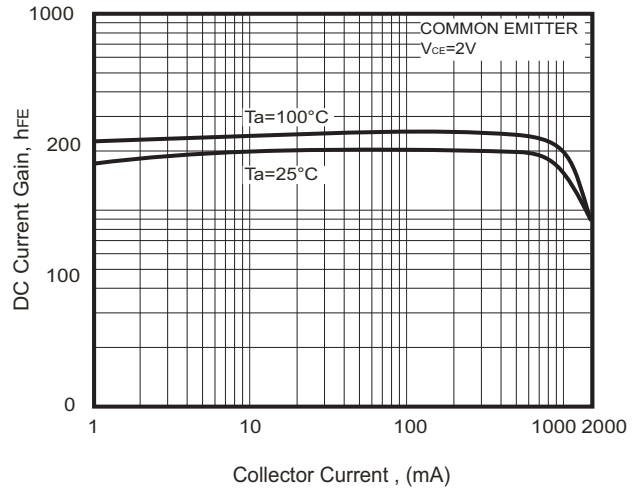


Fig.3 -  $V_{BEsat} - I_c$

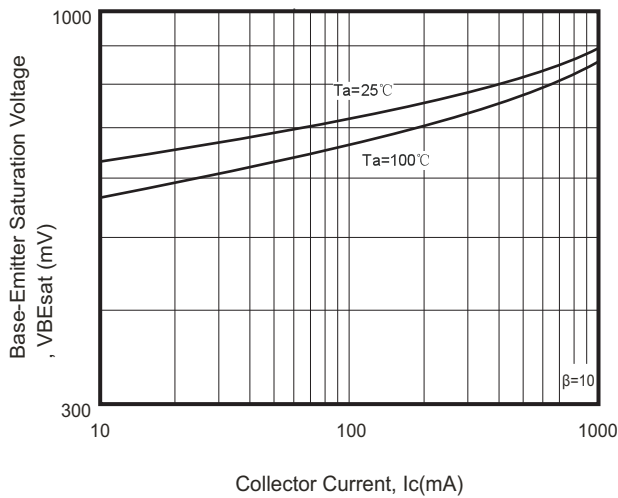


Fig.4-  $V_{CEsat} - I_c$

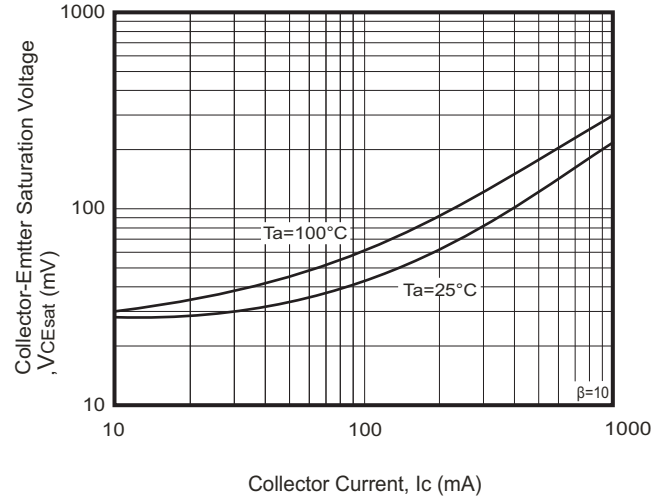


Fig.5 -  $I_c - V_{BE}$

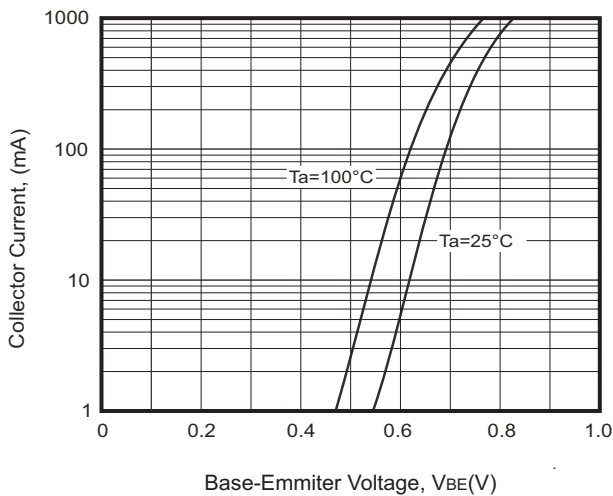
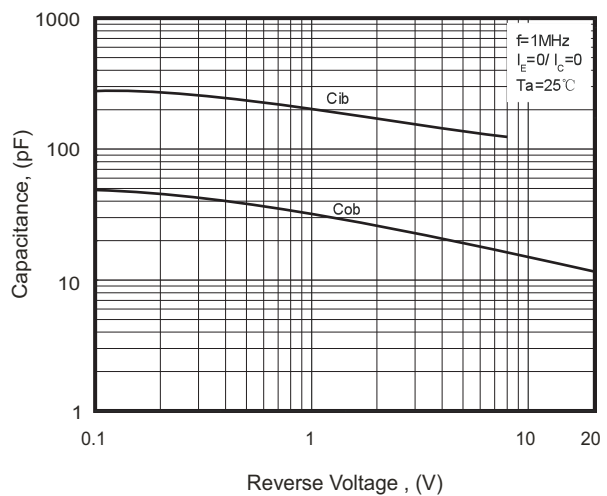
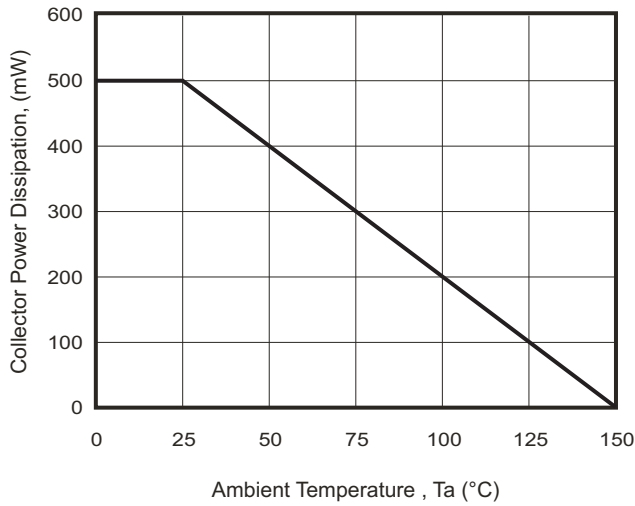


Fig.6 -  $C_{ob}/C_{ib} - V_{CB}/V_{EB}$



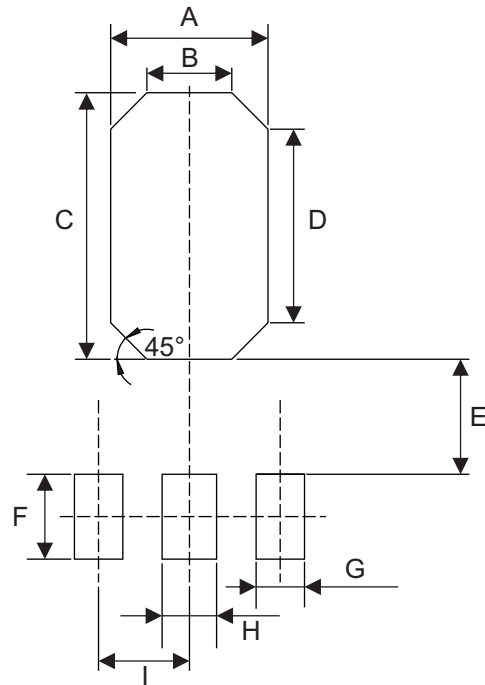
## RATING AND CHARACTERISTIC CURVES (2SC2873-G)

Fig.7 -  $P_c - T_a$



### Suggested PAD Layout

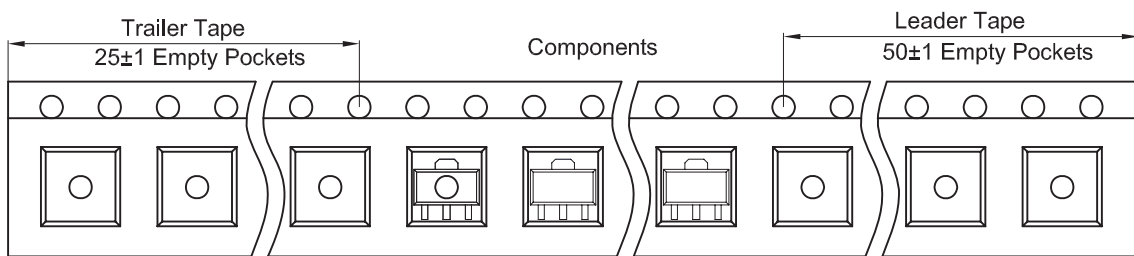
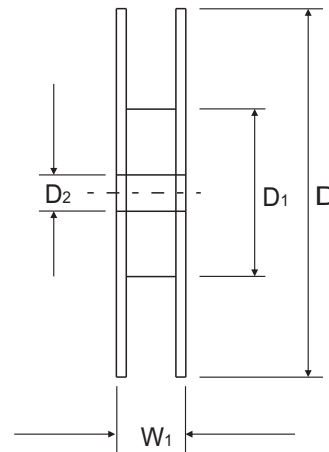
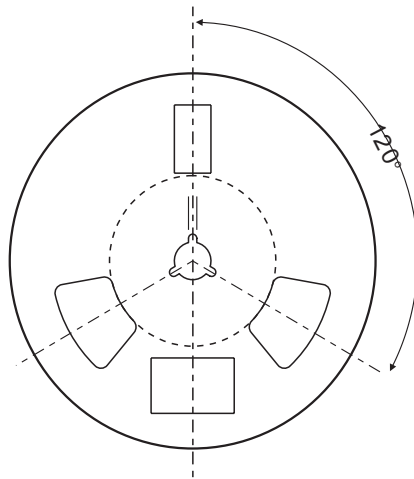
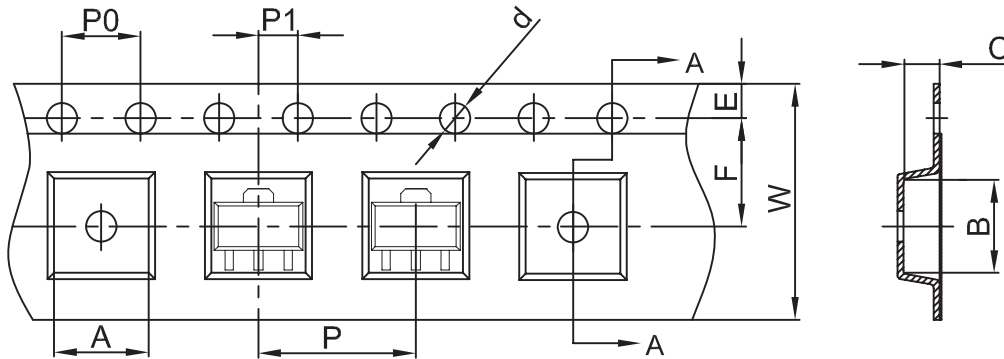
SIZE	SOT-89-3L	
	(mm)	(inch)
A	2.60	0.102
B	1.40	0.055
C	4.40	0.173
D	3.20	0.126
E	1.90	0.075
F	1.40	0.055
G	0.80	0.032
H	0.90	0.035
I	1.50	0.059



### Standard Packaging

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

## Reel Taping Specification



SOT-89-3L	SYMBOL	A	B	C	d	D	D1	D2
	(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

SOT-89-3L	SYMBOL	E	F	P	P0	P1	W	W1
	(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