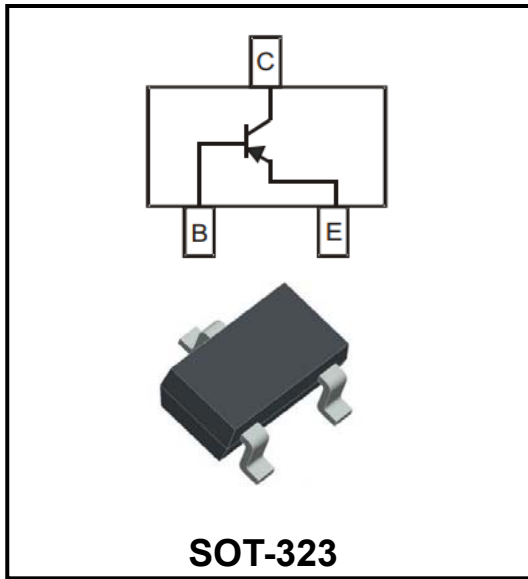


PNP General Purpose Transistor



Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- Part no. with suffix "Q" means AEC-Q101 qualified

Applications

- General purpose switching and amplification

Mechanical Data

- Package: SOT-323
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Marking: FR.

■Maximum Ratings (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Rating
Collector-Base Voltage	V_{CBO}	V	-60
Collector-Emitter Voltage	V_{CEO}	V	-50
Emitter-Base Voltage	V_{EBO}	V	-6
Collector Current	I_C	mA	-150
Collector Power Dissipation	P_C	mW	200
Thermal Resistance From Junction to Ambient (*)	$R_{\theta JA}$	°C/W	625
Junction Temperature	T_j	°C	150
Storage Temperature	T_{stg}	°C	-55 to +150

■Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
2SA1576A-RQ	F2	Approximate 0.005	3000	30000	120000	7" reel



■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

Item	Symbol	Unit	Conditions	Min	TYP	Max
Collector-base breakdown voltage	V _{CBO}	V	I _C = -50μA, I _E =0	-60		
Collector-emitter breakdown voltage	V _{CEO}	V	I _C = -1mA, I _B =0	-50		
Emitter-base breakdown voltage	V _{EBO}	V	I _E = -50μA, I _C =0	-6		
Collector-base cut-off current	I _{CBO}	nA	V _{CB} = -60V, I _E =0			-100
Emitter-base cut-off current	I _{EBO}	nA	V _{EB} = -6V, I _C =0			-100
DC current gain	h _{FE}		V _{CE} = -6V, I _C = -1mA	180		390
Collector-emitter saturation voltage	V _{CE(sat)}	V	I _C = -50mA, I _B = -5mA			-0.5
Output Capacitance	Cob	V	V _{CB} = -12V, I _E =0, f=1MHz		4	
Transition frequency	f _T	MHz	V _{CE} = -12V, I _C = -2mA, f=100MHz		100	

■ Characteristics (Typical)

Fig.1 - Static characteristic

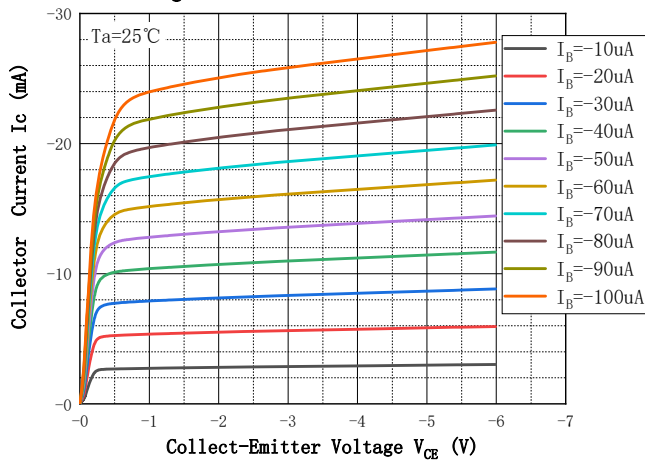


Fig.2 - DC Current Gain

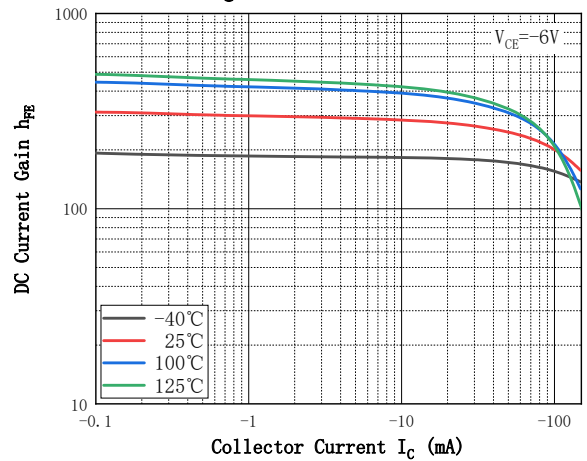


Fig.3 - Collect-Emitter Saturation Voltage

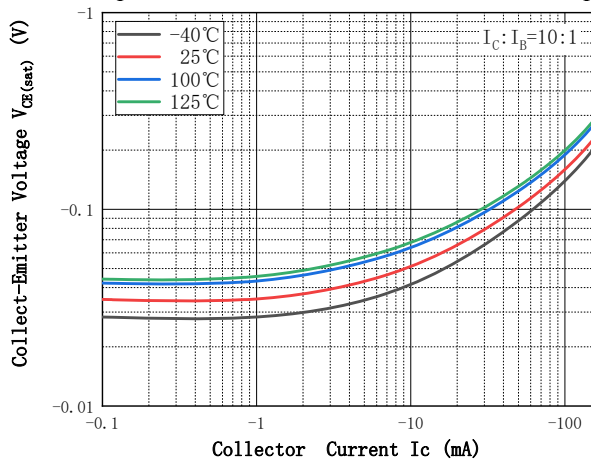


Fig.4 - Base-Emitter Voltage

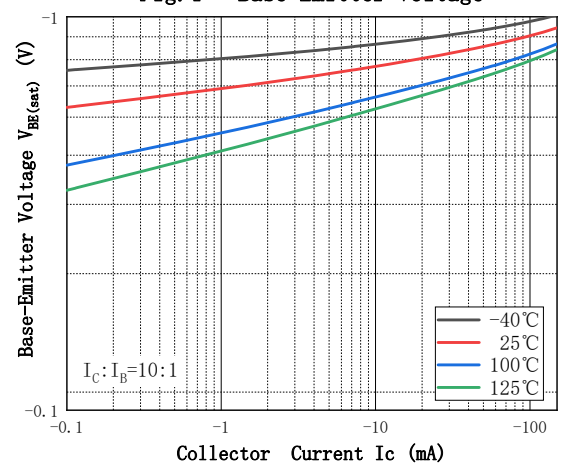


Fig. 5 - Base-Emitter On Voltage

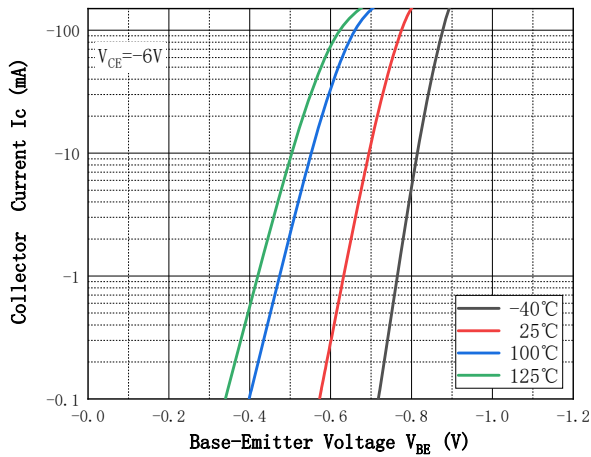
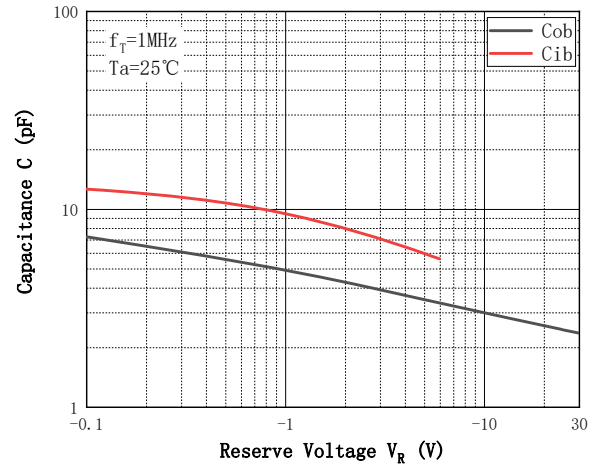
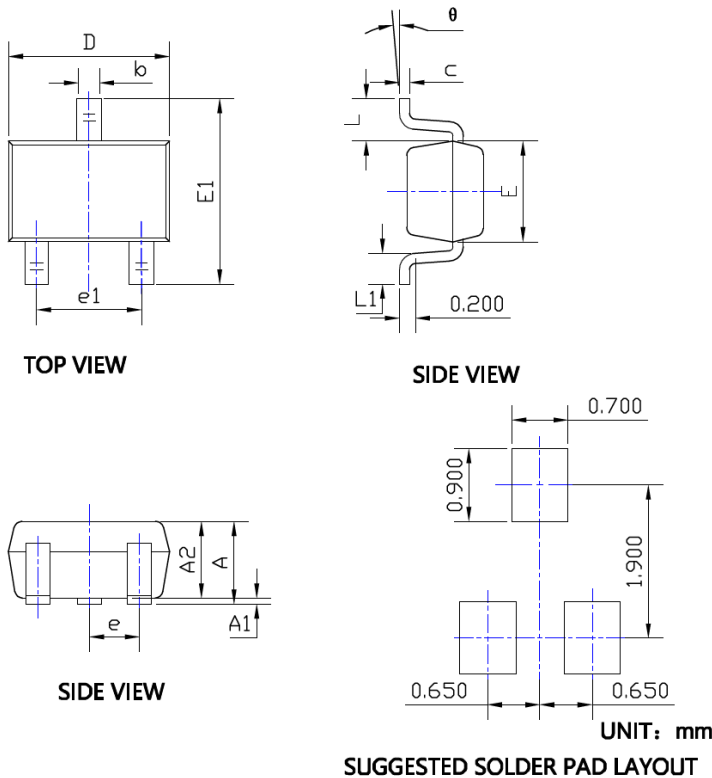


Fig. 6 - Cob/Cib—VCB/VEB



■ SOT-323 Package Outline Dimensions & Suggested Pad Layout



SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.043	0.900	1.100
A1	0.000	0.004	0.000	0.100
A2	0.035	0.039	0.900	1.000
b	0.006	0.016	0.150	0.400
c	0.004	0.010	0.100	0.250
D	0.071	0.087	1.800	2.200
E	0.045	0.053	1.150	1.350
E1	0.085	0.096	2.150	2.450
e	0.026TYP		0.650TYP	
e1	0.047	0.055	1.200	1.400
L	0.021REF		0.525REF	
L1	0.010	0.018	0.260	0.460
θ	0°	8°	0°	8°

NOTE:
 1. PACKAGE BODY SIZES EXCLUDE MOLD FLASH AND GATE BURRS.
 2. TOLERANCE 0.1mm UNLESS OTHERWISE SPECIFIED.
 3. THE PAD LAYOUT IS FOR REFERENCE PURPOSES ONLY.



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