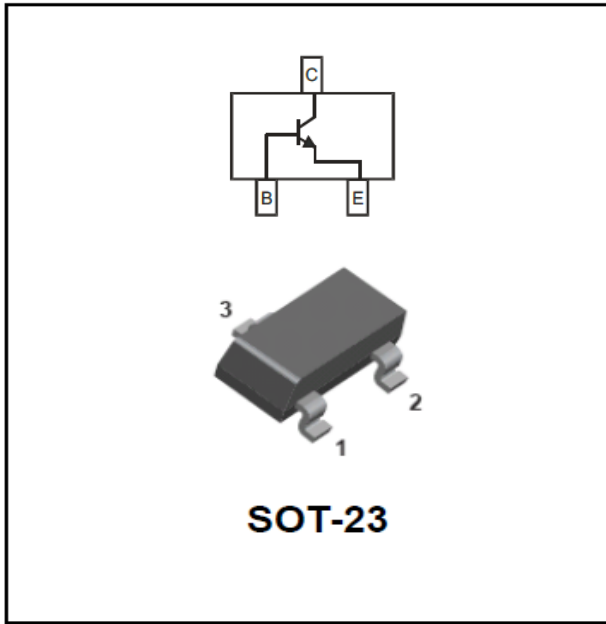


NPN General Purpose Amplifier



Features

- Low collectoremitter saturation voltage
- High Conductance
- Epoxy meets UL-94 V-0 flammability rating
- Halogen free available upon request by adding suffix "HF"
- Moisture Sensitivity Level 1

Applications

- NPN General Purpose Amplifier

Mechanical Data

- Case: SOT-23
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Marking: AJR

■Maximum Ratings (Ta=25°C)

Item	Symbol	Unit	Conditions	Value
CollectorEmitter Voltage	V_{CEO}	V	$I_C=2mA, I_B=0$	80
CollectorBase Voltage	V_{CBO}	V	$I_C=50\mu A, I_E=0$	80
EmitterBase Voltage	V_{EBO}	V	$I_E=50\mu A, I_C=0$	5
Collector Current	I_C	mA		500
Collector Power Dissipation	P_C	mW		200
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	°C/W		625
Operation Junction Temperature	T_j	°C		150
Storage Temperature	T_{stg}	°C		-55 to +150

■Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
2SD1782-R	F2	Approximate 0.008	3000	30000	120000	7" reel

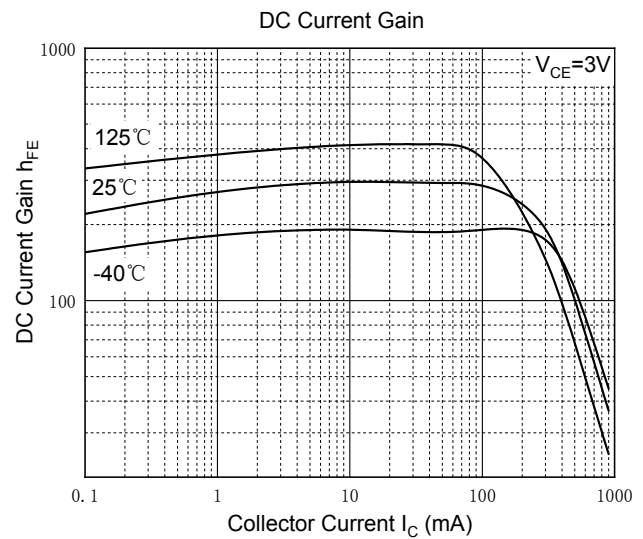
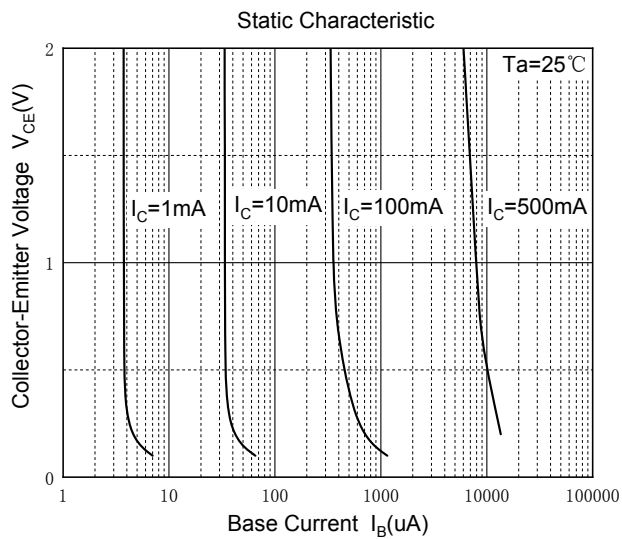


2SD1782-R

■Electrical Characteristics (T_a=25°C)

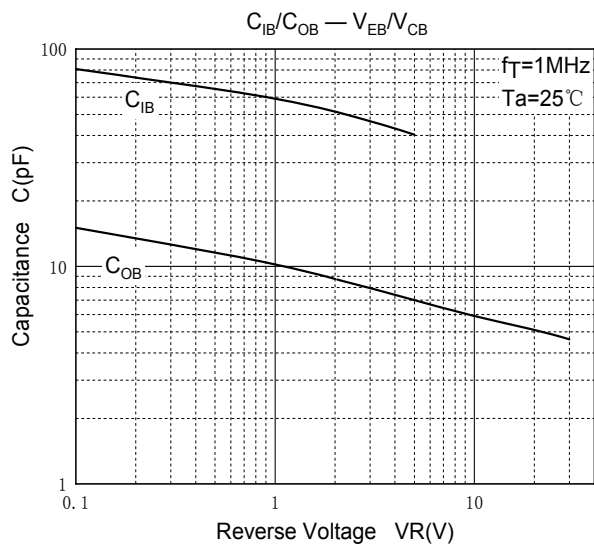
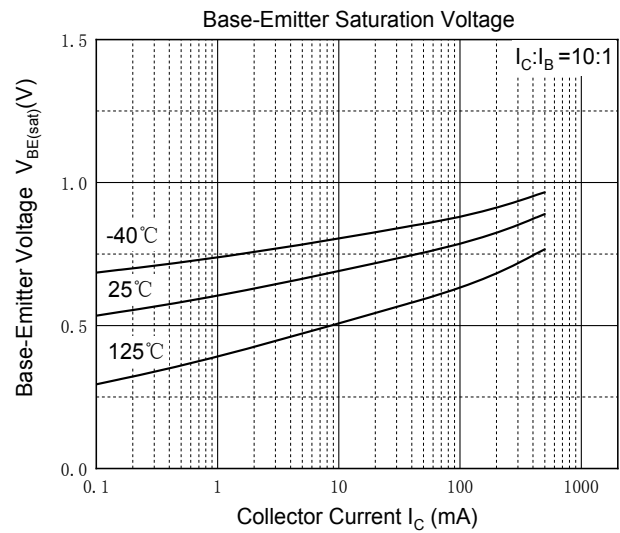
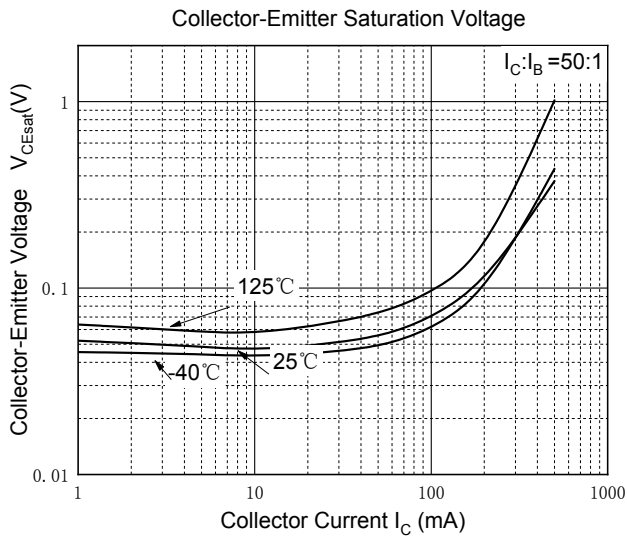
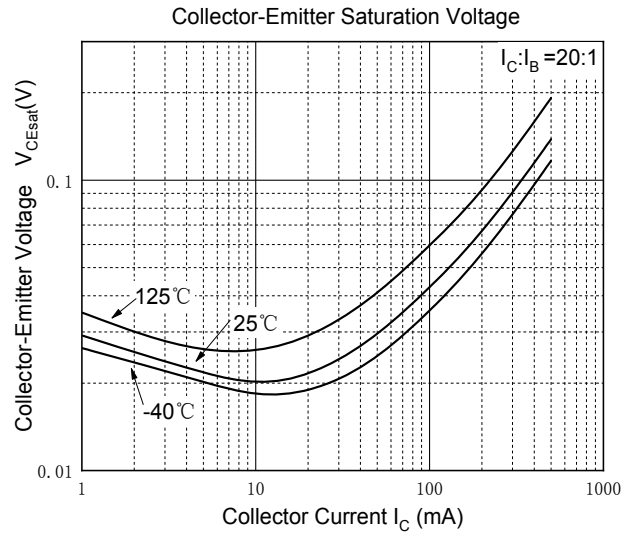
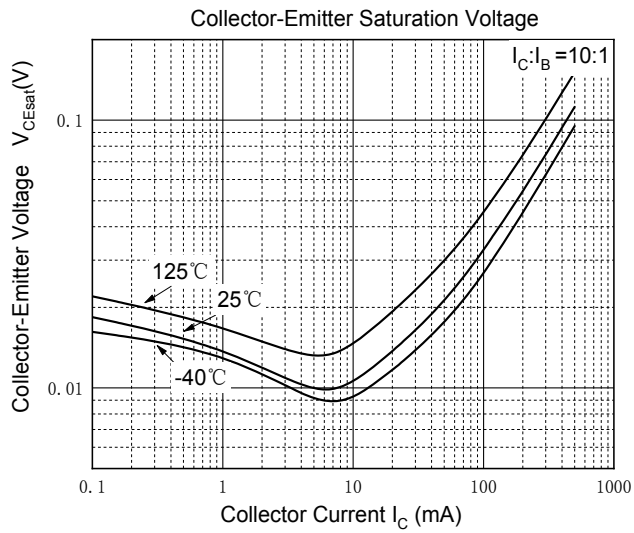
Item	Symbol	Unit	Conditions	Min	TYP	Max
Collector-Emitter Voltage	V _{CE0}	V	I _C =2mA, I _B =0	80		
Collector-Base Voltage	V _{CBO}	V	I _C =50uA, I _E =0	80		
Emitter-Base Voltage	V _{EBO}	V	I _E =50uA, I _C =0	5		
Collector-base Cutoff Current	I _{CBO}	uA	V _{CB} =50V			0.5
Base-emitter Cutoff Current	I _{EBO}	uA	V _{EB} =4V			0.5
DC Current Gain	h _{FE}		I _C =100mA V _{CE} =3V	180		390
Collector-Emitter Saturation Voltage	V _{CE(sat)}	V	I _C =500mA I _B =50mA			0.5
Base-Emitter Saturation Voltage	V _{BE(sat)}	V	I _C =500mA I _B =50mA			1.2
Transition frequency	f _T	MHz	I _C =50mA, V _{CE} =10V, f=100MHz		180	

■Characteristics(Typical)





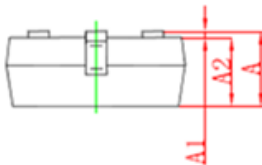
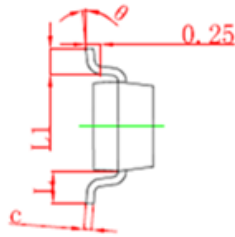
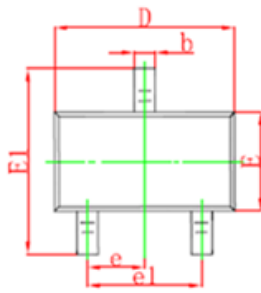
2SD1782-R





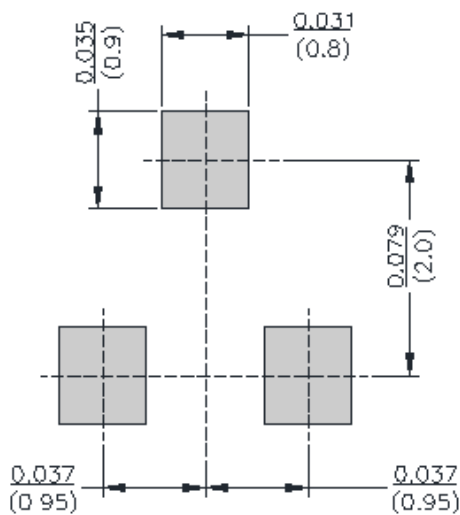
2SD1782-R

■SOT23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

■SOT23 Soldering Footprint





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