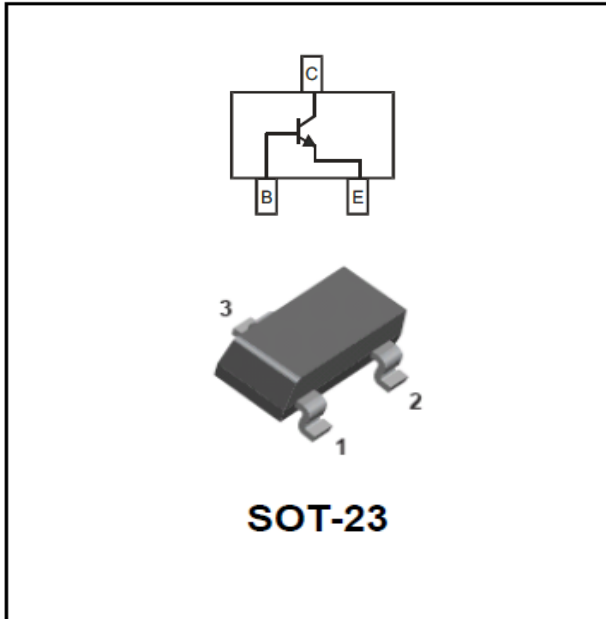


NPN General Purpose Amplifier



Features

- Low collector-emitter 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
Collector-Emitter Voltage	V_{CE0}	V	$I_C=2mA, I_B=0$	80
Collector-Base Voltage	V_{CBO}	V	$I_C=50\mu A, I_E=0$	80
Emitter-Base 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)

PREFERRED 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

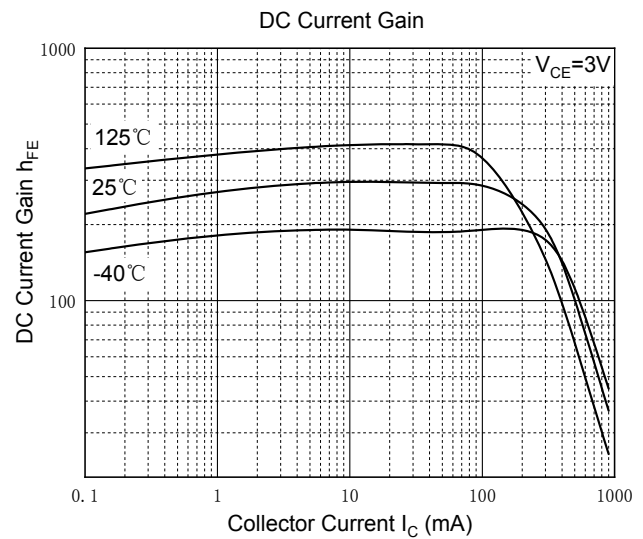
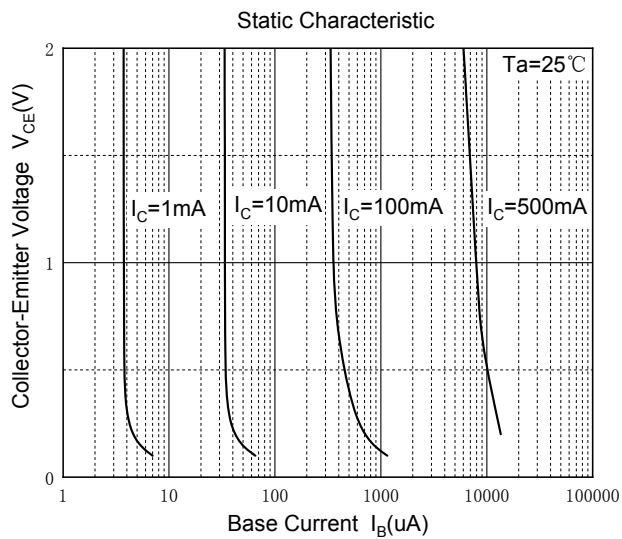


2SD1782-R

■Electrical Characteristics (T_a=25°C)

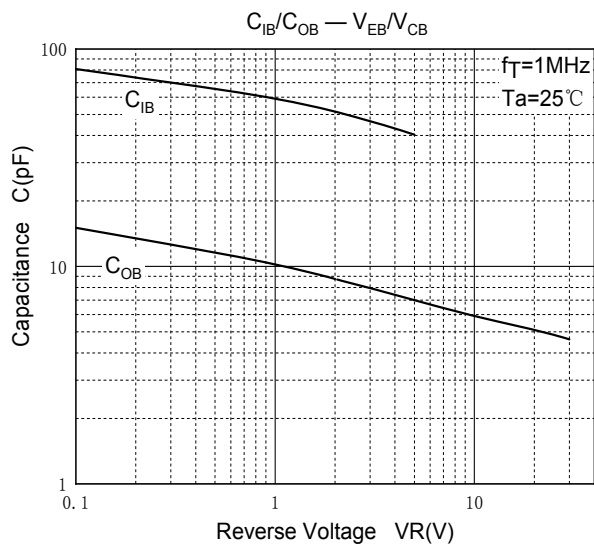
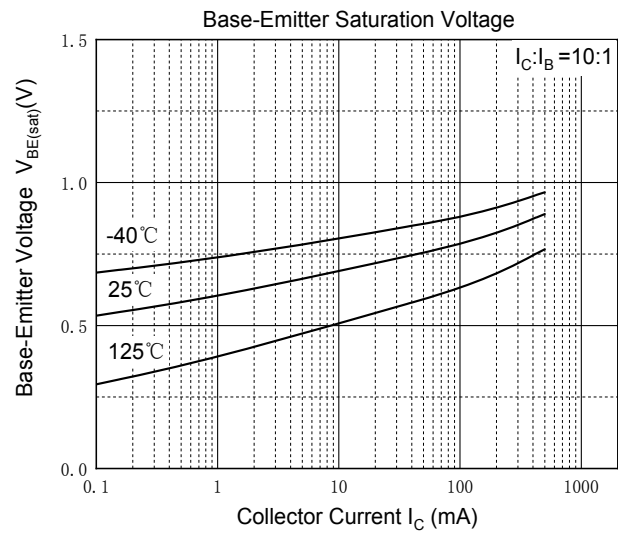
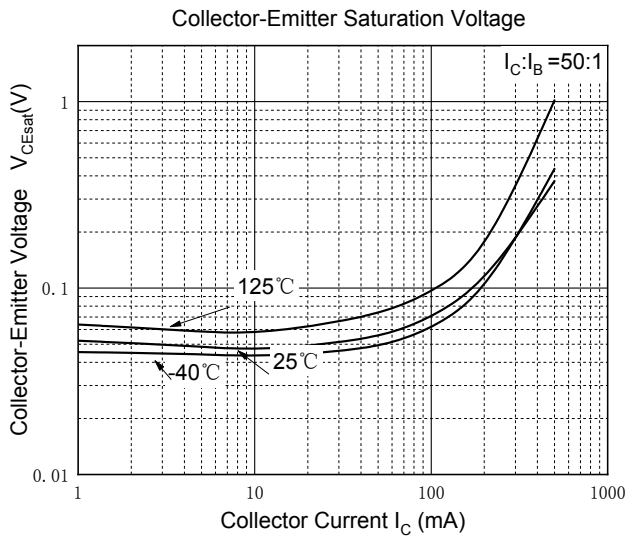
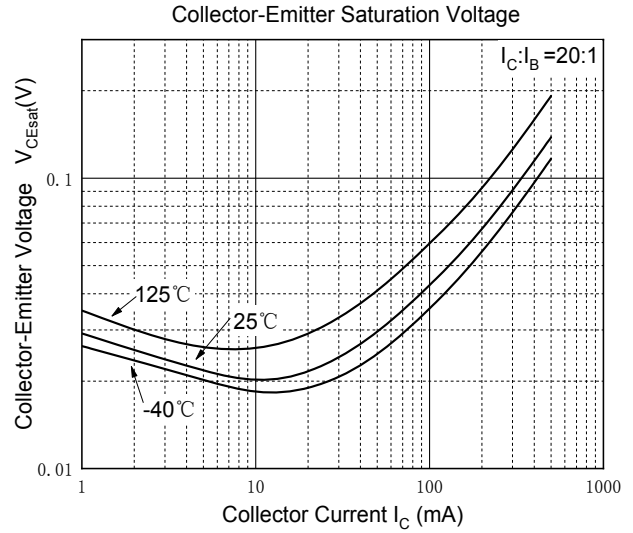
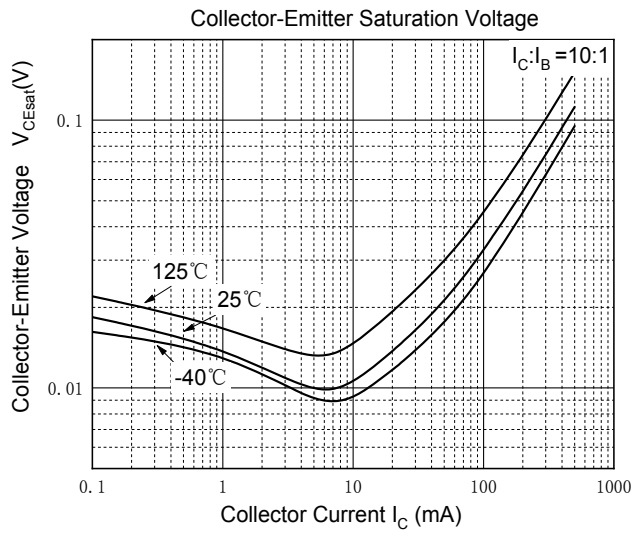
Item	Symbol	Unit	Conditions	Min	TYP	Max
Collector-Emitter Voltage	V _{CE0}	V	I _C =2mA, I _B =0	80		
Collector-Base Voltage	V _{CBO}	V	I _C =50uA, I _E =0	80		
Emitter-Base Voltage	V _{EBO}	V	I _E =50uA, I _C =0	5		
Collector-base Cutoff Current	I _{CBO}	uA	V _{CB} =50V			0.5
Base-emitter Cutoff Current	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)





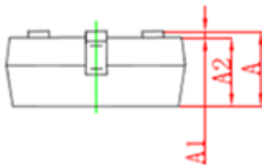
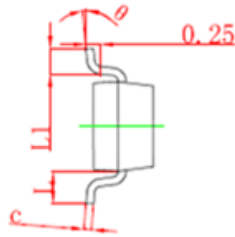
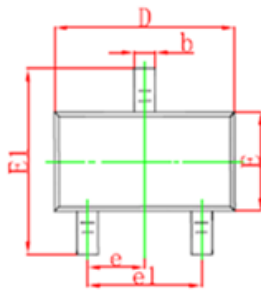
2SD1782-R





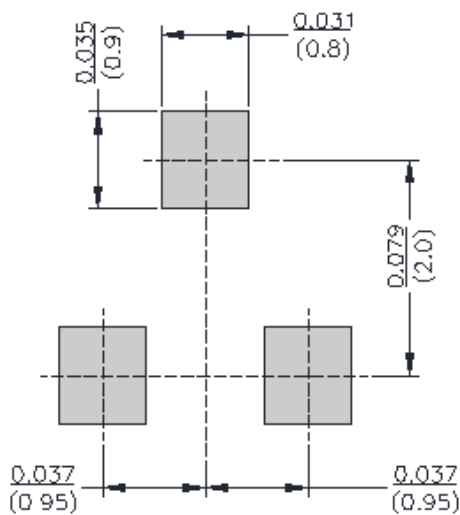
2SD1782-R

■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





Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.