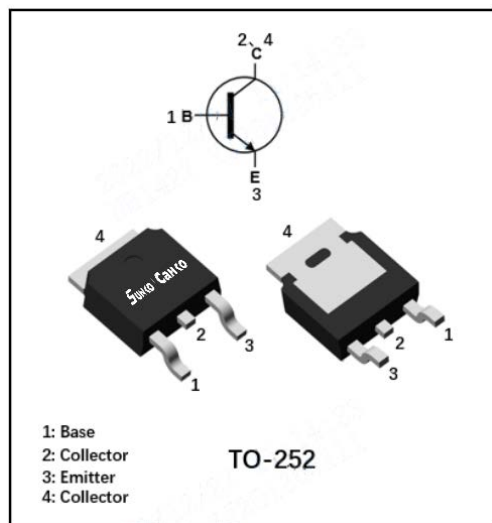


NPN Transistor



Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1

Applications

- Signal Amplification
- Switching Circuit

Mechanical Data

- Package: TO-252
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102

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

Item	Symbol	Unit	Value
Device marking code			2SD1758
Collector-base voltage	V_{CBO}	V	40
Collector-emitter voltage	V_{CEO}	V	32
Emitter-base voltage	V_{EBO}	V	5
Collector current	I_C	A	2
Power dissipation (*)	P_D	W	1.2
Thermal resistance, junction-to-ambient (*)	R_{thJA}	°C/W	105
Junction temperature	T_j	°C	-55 to +150
Storage temperature	T_{STG}	°C	-55 to +150

(*) Device mounted on FR-4 PCB 1.0*1.0*0.06 inch, mounting pad for collector 1 cm²

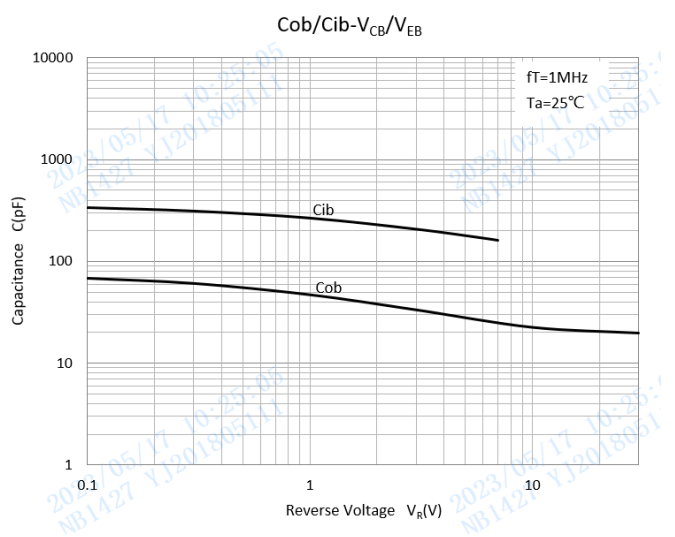
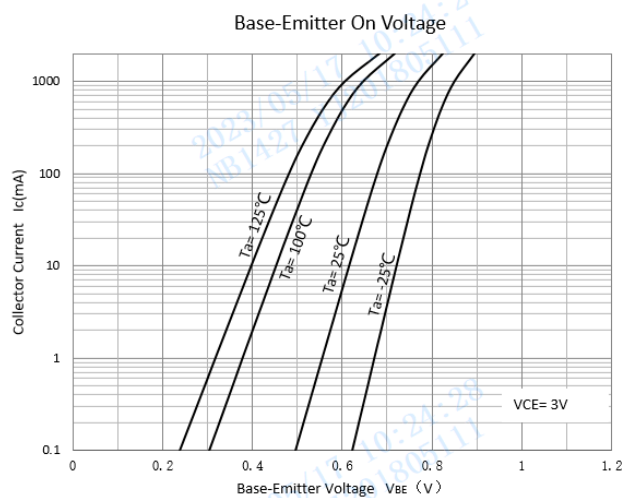
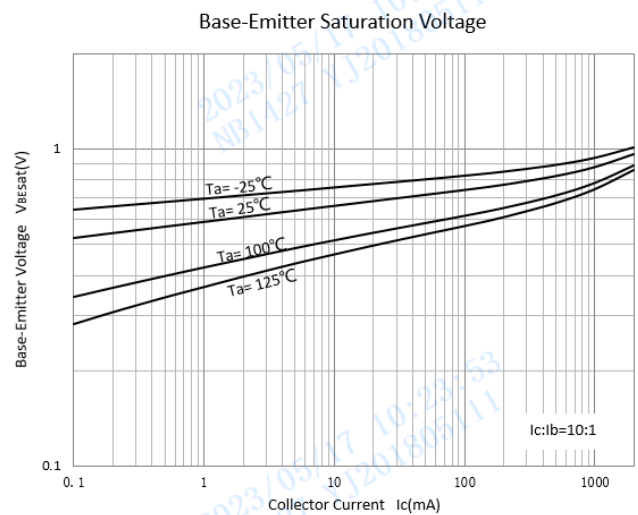
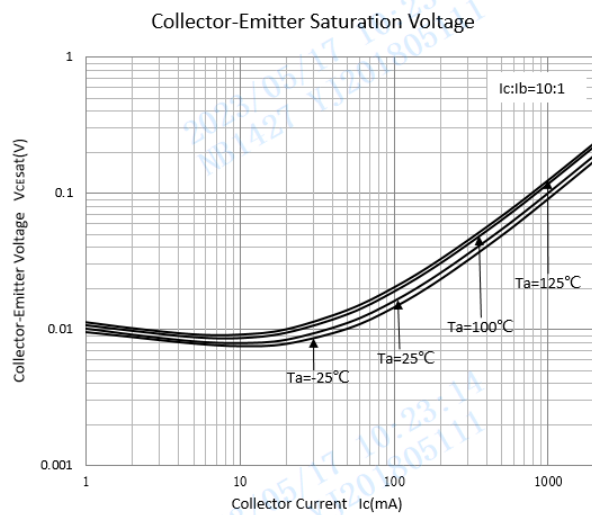
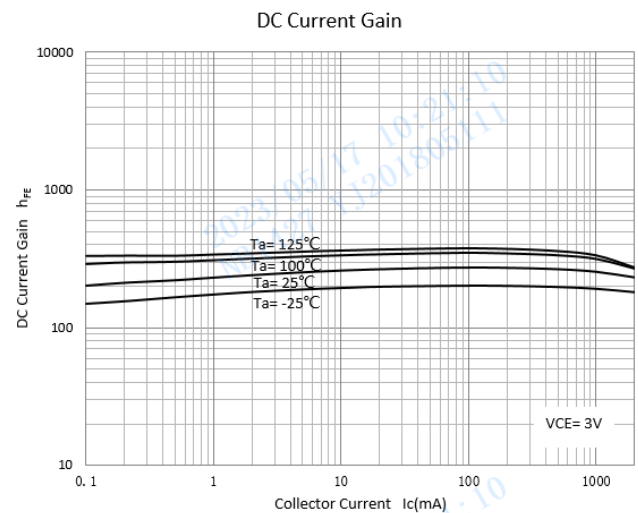
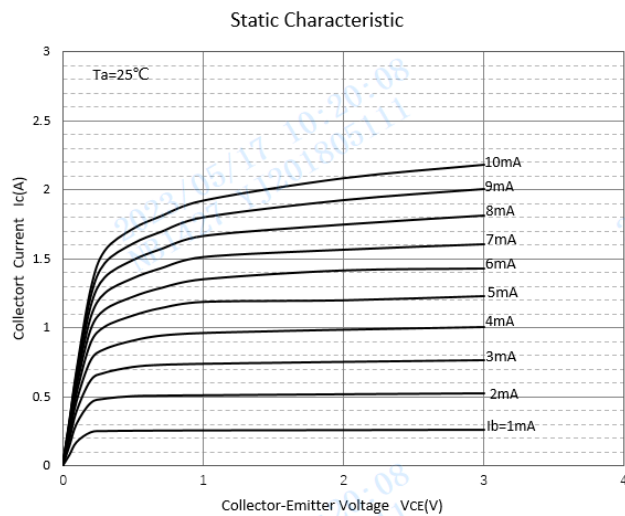
■ Electrical Characteristics (Ta=25°C unless otherwise noted)

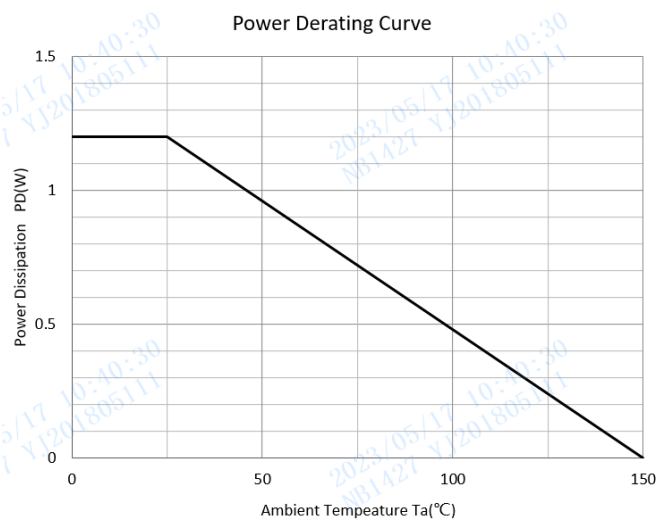
Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	$V_{(BR)CBO}$	V	$I_C = 100\mu A, I_E = 0$	40		
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	V	$I_C = 1mA, I_B = 0$	32		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	V	$I_E = 100\mu A, I_C = 0$	5		
Collector-base cut-off current	I_{CBO}	μA	$V_{CB} = 20V$			1
Emitter-base cut-off current	I_{EBO}	μA	$V_{EB} = 4V$			1
DC current gain	h_{FE}		$V_{CE} = 3V, I_C = 500mA$	180		390
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	$I_C = 2A, I_B = 0.2A$			0.8
Collector-base output capacitance	Cob	pF	$V_{CB} = 10V, I_E = 0A, f = 1MHz$		23	

■ Other Characteristics (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Transition frequency	f_T	MHz	$V_{CE} = 5V, I_C = 0.1A, f = 10MHz$	50	-	-

■ Characteristics(Typical)

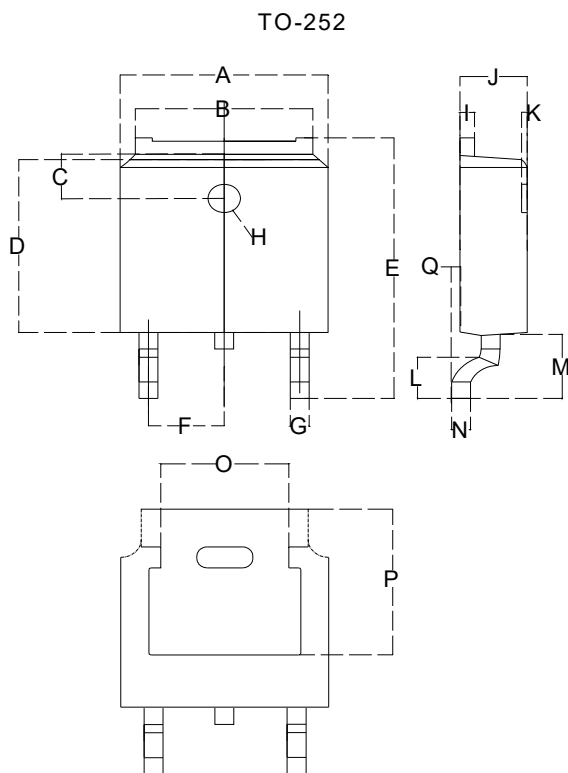




■ Ordering Information (Example)

PREFERED P/N	PACKING CODE	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
2SD1758	F1	2500	2500	25000	13"Reel

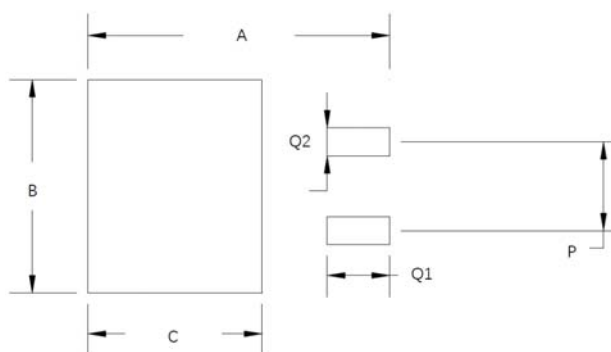
■ TO-252 Package information



Dimensions in millimeters

TO-252		
Dim	Min	Max
A	6.500	6.700
B	5.100	5.460
C	1.400	1.800
D	6.000	6.200
E	10.000	10.400
F	2.166	2.366
G	0.660	0.860
H	Φ 1.050	Φ 1.350
I	0.460	0.580
J	2.200	2.400
K	0	0.300
L	0.890	2.290
M	2.730	3.080
N	0.430	0.580
O	4.20	4.95
P	5.15	5.45
Q	0	0.2

■ Suggested Pad Layout



Dim	Millimeters
A	11.4
B	6.74
C	6.23
P	4.56
Q1	2.28
Q2	1.52

Disclaimer

The information presented in this document is for reference only. Shanghai Sunco Electronics 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 automotive electronics, are not designed for use in medical, life-saving, lifesustaining, or military, Russiansunco 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.russiansunco.com](http://www.russiansunco.com) , or consult your nearest Russiansunco's sales office for further assistance.