

SOT-23 Plastic-Encapsulate Transistors

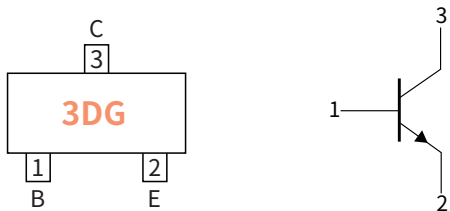
Features

- Power dissipation of 350mW
- High stability and high reliability

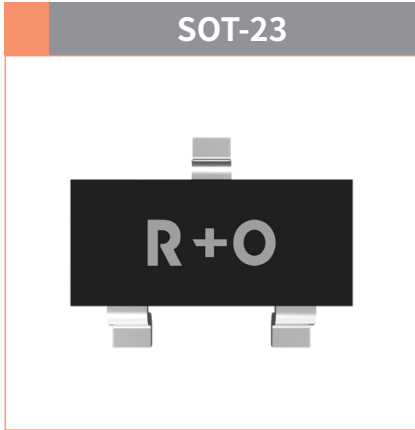
Mechanical Data

- Case: SOT-23
Molding compound meets UL 94V-0 flammability rating
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026

Function Diagram



Collector-Emitter Voltage
V_{CEO} 350V
Collector Current
0.2 Ampere



Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOT-23	R1	0.008	3000	45000	180000	7"

Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	VALUE
Collector-Base Voltage	V _{CBO}	V	400
Collector-Emitter Voltage	V _{CEO}		350
Emitter-Base Voltage	V _{EBO}		6.0
Collector Current	I _C	A	0.2
Collector Power Dissipation	P _C	mW	350
Storage temperature	T _{stg}	°C	-55 ~+150
Junction temperature	T _j	°C	-55 ~+150
Typical Thermal Resistance	R _{θJA}	°C /W	357

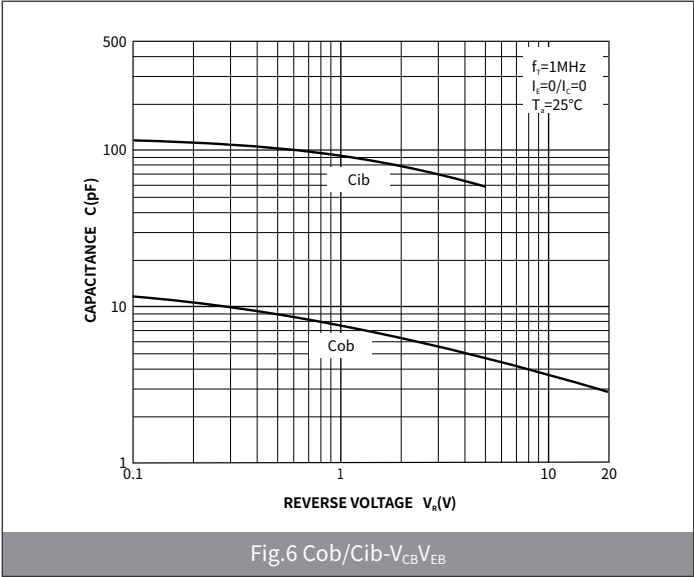
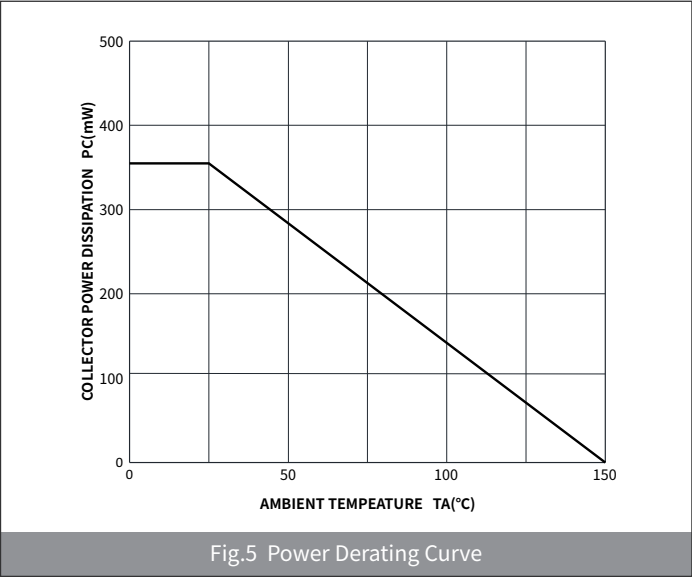
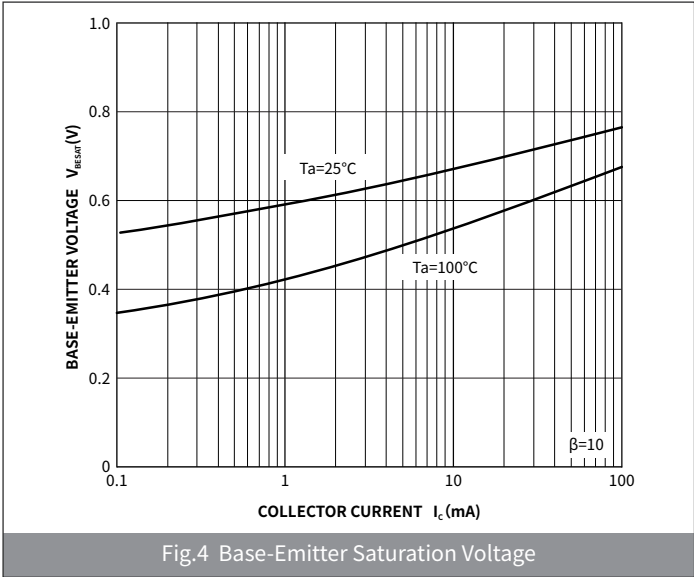
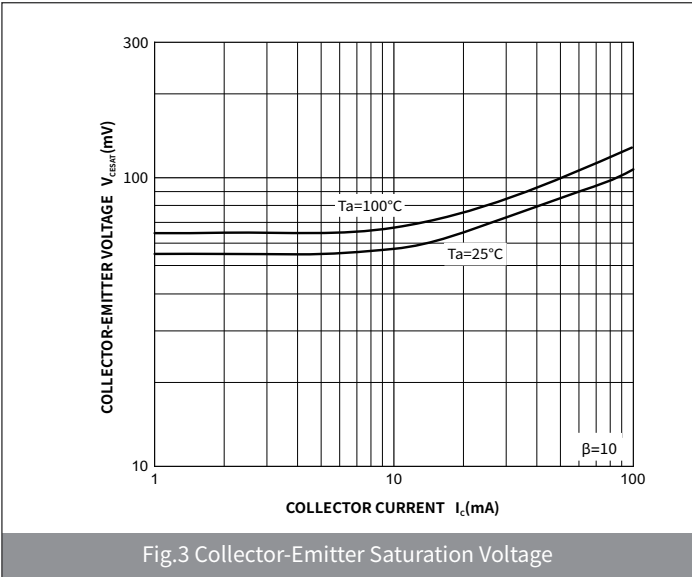
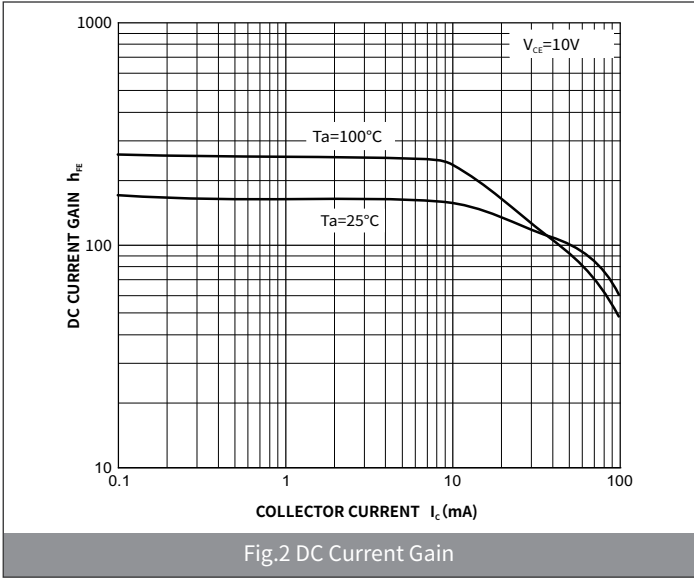
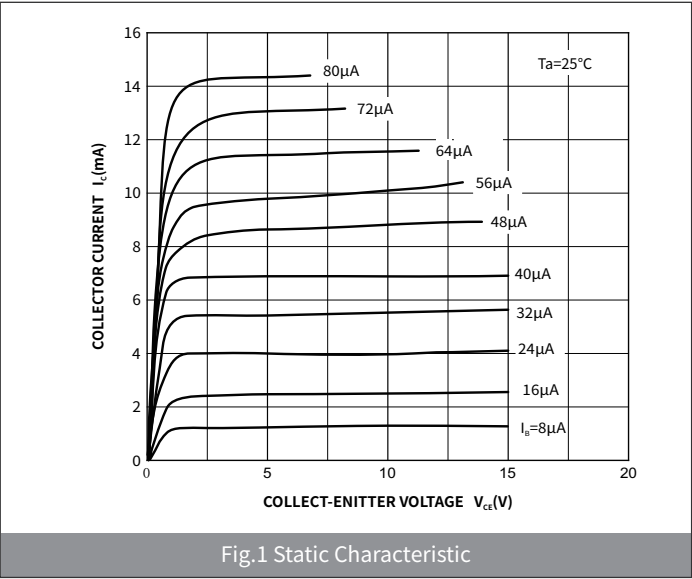
● Electrical Characteristics (Ta=25°C Unless otherwise noted)

PARAMETER	SYMBOL	UNIT	Condition	Min	Type	Max
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	V	$I_C=100\mu A, I_E=0$	400	—	—
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$		$I_C=1.0mA, I_B=0$	350	—	—
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$		$I_E=10\mu A, I_C=0$	6.0	—	—
Collector-Base cut-off current	I_{CBO}	nA	$V_{CB}=400V, I_E=0$	—	—	100
Collector-Emitter cut-off current	I_{CEO}		$V_{CE}=300V, I_B=0$	—	—	100
Emitter-Base cut-off current	I_{EBO}		$V_{EB}=6.0V, I_C=0$	—	—	100
DC Current Gain	$h_{FE(1)}$	—	$I_C=1.0mA, V_{CE}=10V$	50	—	—
	$h_{FE(2)}$		$I_C=10mA, V_{CE}=10V$	80	—	300
	$h_{FE(3)}$		$I_C=50mA, V_{CE}=10V$	40	—	—
	$h_{FE(4)}$		$I_C=100mA, V_{CE}=10V$	40	—	—
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	$I_C=10mA, I_B=1.0mA$	—	—	0.2
			$I_C=50mA, I_B=5.0mA$	—	—	0.3
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	V	$I_C=10mA, I_B=1.0mA$	—	—	0.75
Input Capacitance	C_{ib}	pF	$V_{CB}=20V, I_E=0, f=1MHz$	—	130	—
Output Capacitance	C_{ob}	pF	$V_{CB}=20V, I_E=0, f=1MHz$	—	7	—

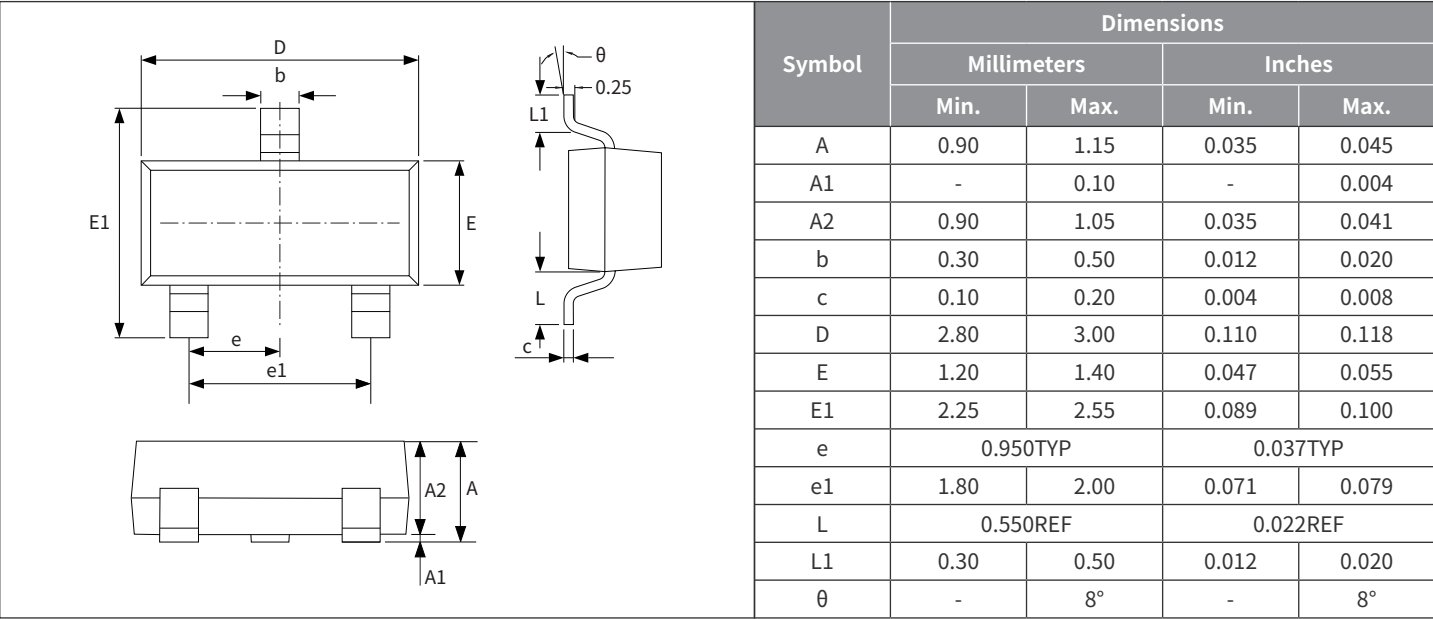
● Small-signal Characteristics

ITEM	SYMBOL	Condition	UNIT	Min	Max
Transition frequency	f_T	$I_C=10mA, V_{CE}=20V$	MHz	50	—

● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



● Package Outline Dimensions (SOT-23)



● Suggested Pad Layout

