

SOT-89 Plastic-Encapsulate Transistors

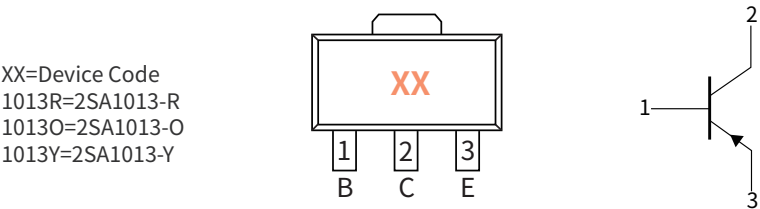
Features

- High voltage
- Power dissipation of 500mW
- High stability and high reliability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

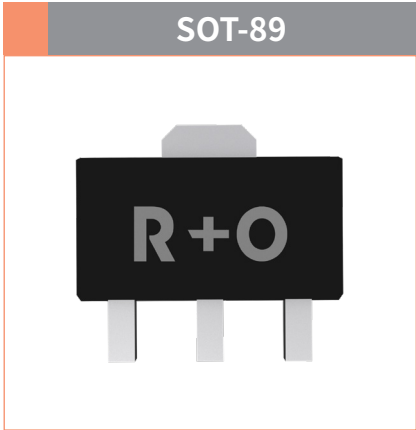
Mechanical Data

- Case: SOT-89
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant,halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026

Function Diagram



Collector-Base Voltage
VCBO -160V
Collector Current
-1.0 Ampere



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

PARAMETER	SYMBOL	UNIT	VALUE
Collector-Base Voltage	V_{CBO}	V	-160
Collector-Emitter Voltage	V_{CEO}		-160
Emitter-Base Voltage	V_{EBO}		-6.0
Collector Current	I_C	A	-1.0
Collector Power Dissipation	P_C	mW	500
Storage temperature	T_{stg}	°C	-55 ~+150
Junction temperature	T_j	°C	-55 ~+150
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	250

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

PARAMETER	SYMBOL	UNIT	Condition	Min	Max
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	V	$I_C=-100\mu A, I_E=0$	-160	—
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$		$I_C=-1.0mA, I_B=0$	-160	—
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$		$I_E=-10\mu A, I_C=0$	-6.0	—
Collector-Base cut-off current	I_{CBO}	μA	$V_{CB}=-150V, I_E=0$	—	-1.0
Emitter-Base cut-off current	I_{EBO}		$V_{EB}=-6.0V, I_C=0$	—	-1.0
DC Current Gain	h_{FE}	V	$I_C=-200mA, V_{CE}=-5.0V$	60	320
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	$I_C=-500mA, I_B=-50mA$	—	-1.5
Base-Emitter Saturation Voltage	V_{BE}	V	$I_C=-5.0mA, V_{CE}=-5.0V$	—	-0.75

● Classification Of h_{FE}

RANK	R	O	Y
Range	60-120	100-200	160-320

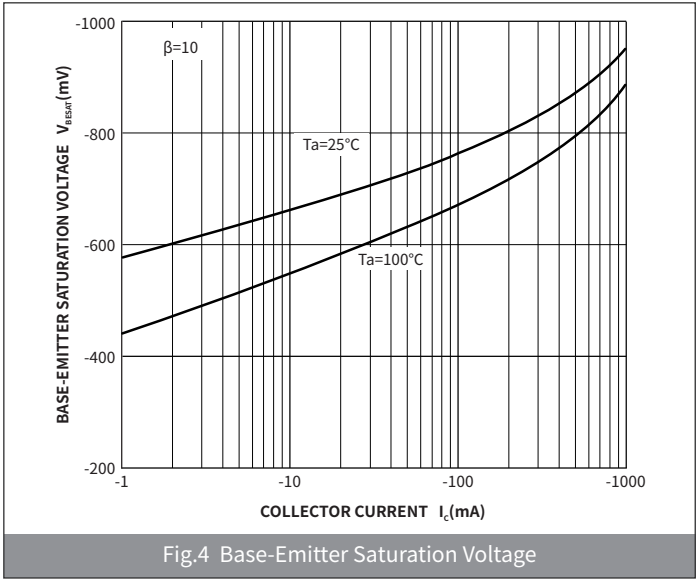
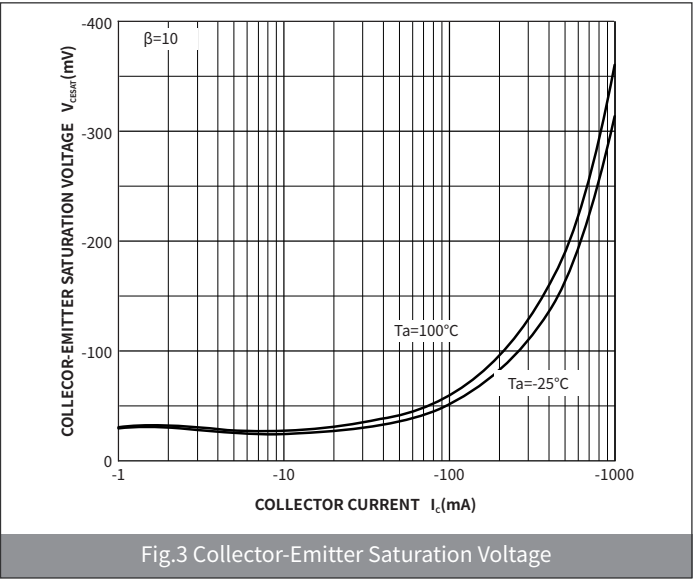
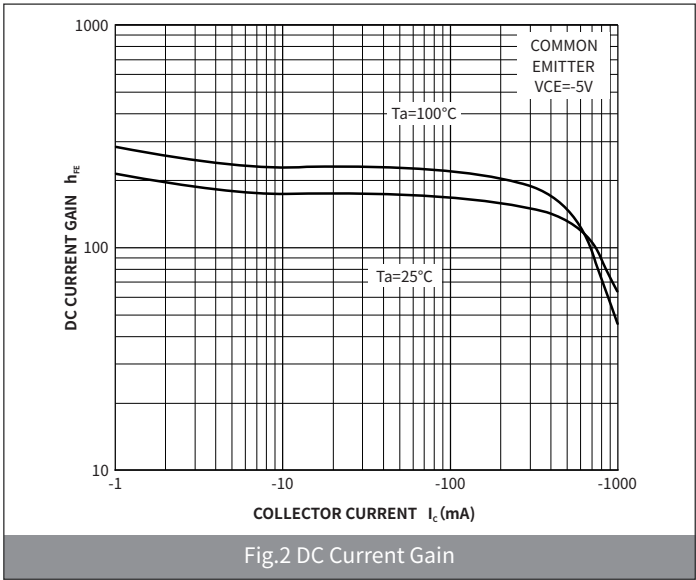
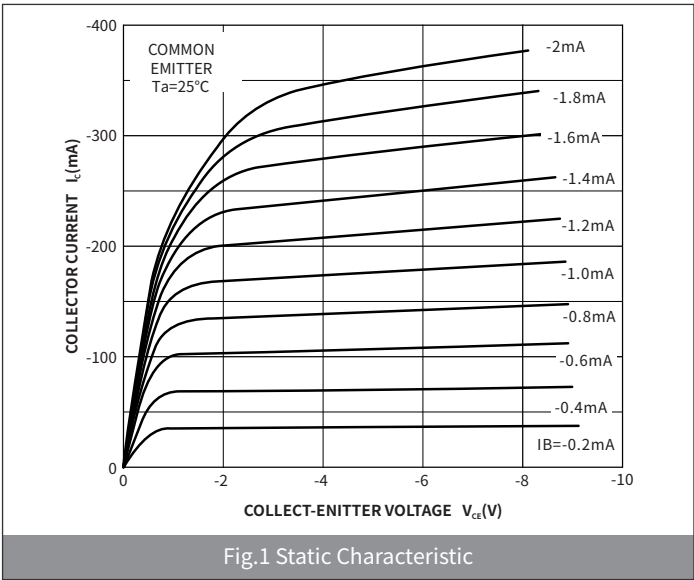
● Small-signal Characteristics

ITEM	SYMBOL	Condition	UNIT	Min	Tye	Max
Transition frequency	f_T	$I_C = -200\text{mA}$, $V_{CE} = -5\text{V}$	MHz	15	—	—

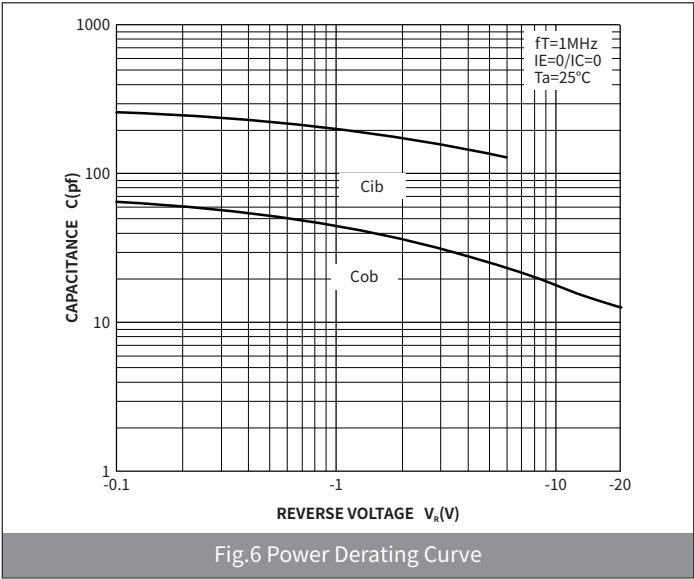
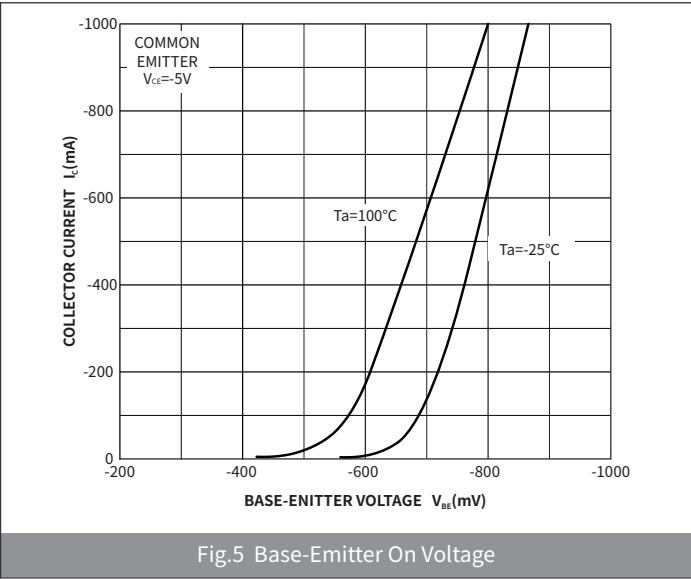
● Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOT-89	R1	0.055	1000	7000	21000	7"

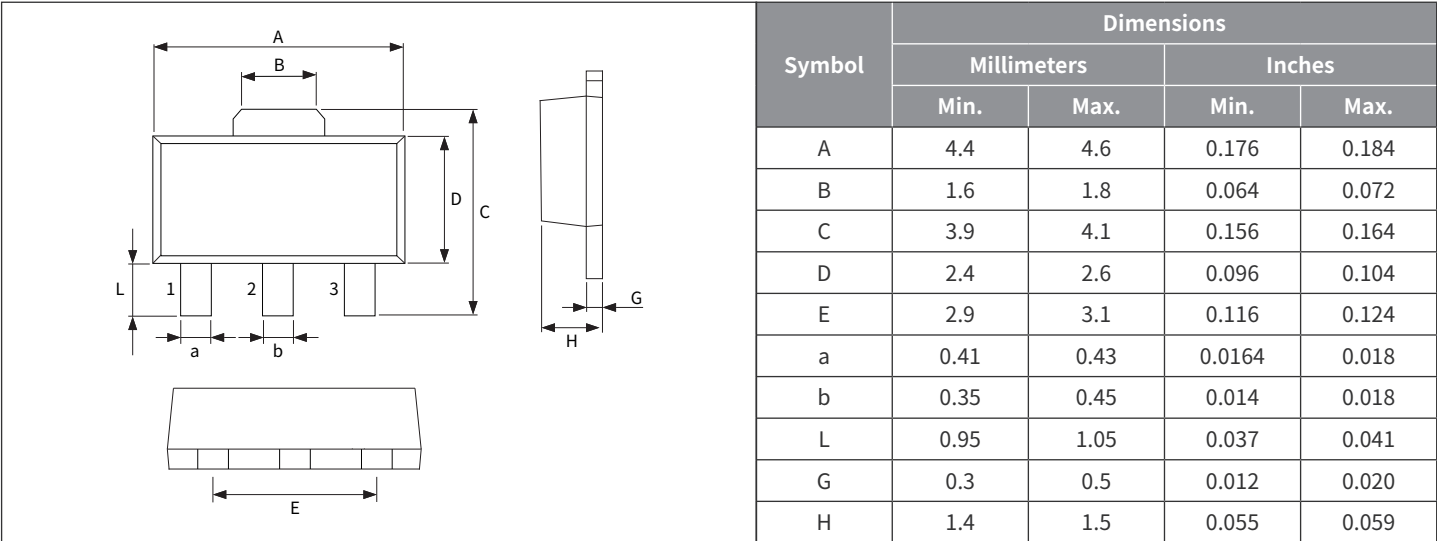
● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



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● Package Outline Dimensions (SOT-89)



● Suggested Pad Layout

