

## SOT-89 Plastic-Encapsulate Transistors

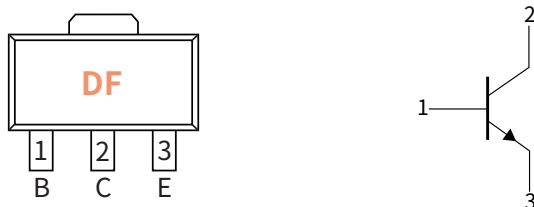
### ● Features

- Complementary to 2SB1260
- Power dissipation of 500mW
- High stability and high reliability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

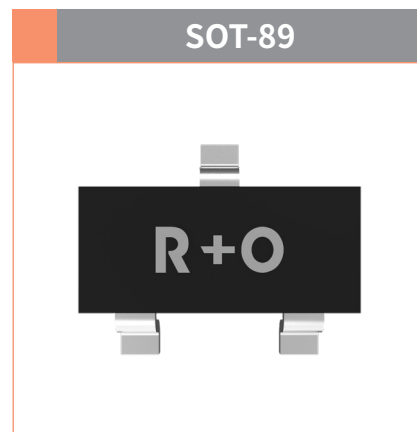
### ● Mechanical Data

- 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 120V  
**Collector Current**  
1 Ampere



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

PARAMETER	SYMBOL	UNIT	VALUE
Collector-Base Voltage	$V_{CBO}$	V	120
Collector-Emitter Voltage	$V_{CEO}$		80
Emitter-Base Voltage	$V_{EBO}$		5.0
Collector Current	$I_C$	A	1.0
Collector Power Dissipation	$P_C$	mW	0.5
Storage temperature	$T_{stg}$	°C	-55 ~+150
Junction temperature	$T_j$	°C	150
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	250

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

PARAMETER	SYMBOL	UNIT	Condition	Min	Typ	Max
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	V	$I_C=100\mu A, I_E=0$	120	—	—
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$		$I_C=1.0mA, I_B=0$	80	—	—
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$		$I_E=100\mu A, I_C=0$	5.0	—	—
Collector-Base cut-off current	$I_{CBO}$	$\mu A$	$V_{CB}=100V, I_E=0$	—	—	1.0
Emitter-Base cut-off current	$I_{EBO}$		$V_{EB}=4.0V, I_C=0$	—	—	0.5
DC Current Gain	$h_{FE}$	V	$I_C=500mA, V_{CE}=3.0V$	120	—	390
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	$I_C=500mA, I_B=50mA$	—	0.15	0.4
Based-Emitter Saturation Voltage	$V_{BE(sat)}$	V	$I_C=500mA, I_B=50mA$	—	—	1.2
Collector Output capacitance	$C_{ob}$	pF	$V_{CB}=100V, I_E=0, f=100MHz$	—	100	—

● **Classification Of  $h_{FE}$**

RANK	P	Q	R
Range	82-180	120-270	180-390

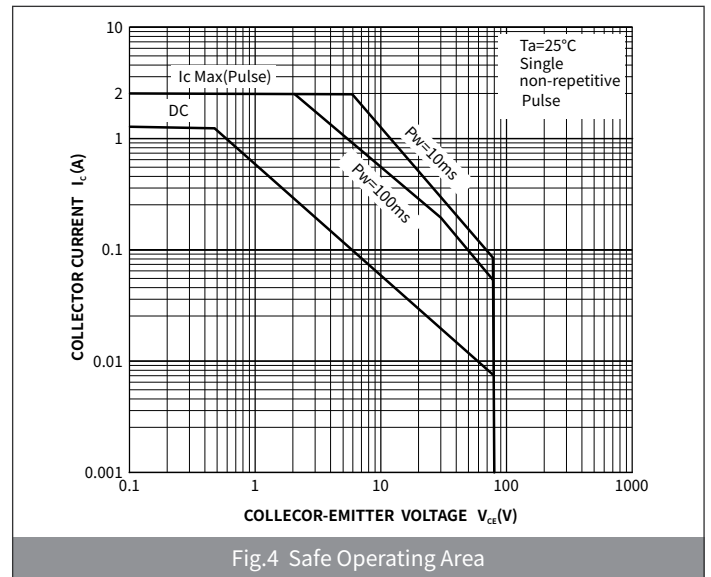
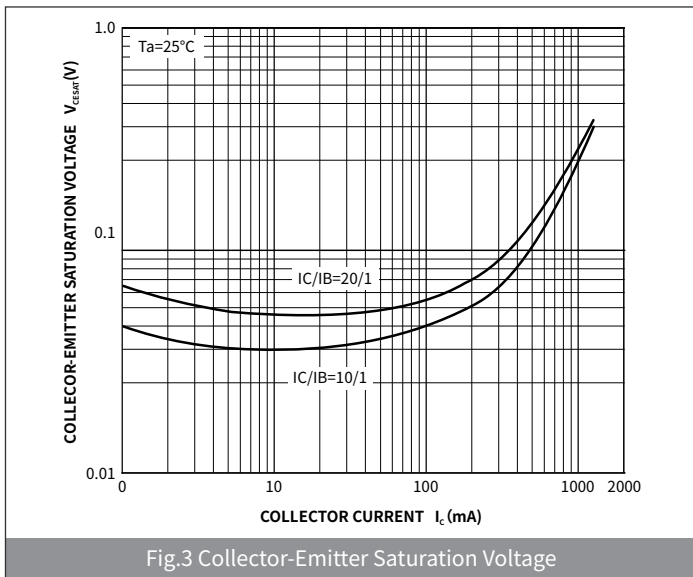
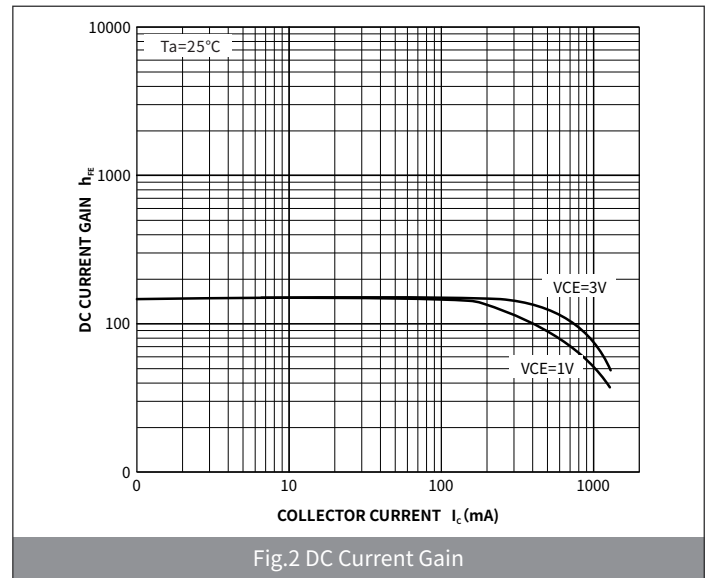
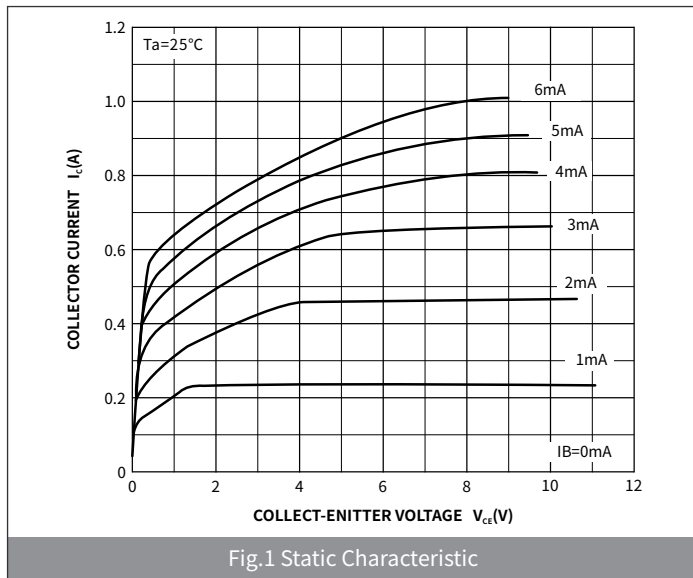
● **Small-signal Characteristics**

ITEM	SYMBOL	Condition	UNIT	Min	Tye	Max
Transition frequency	$f_T$	$I_C=10mA, V_{CE}=50V$	MHz	—	100	—

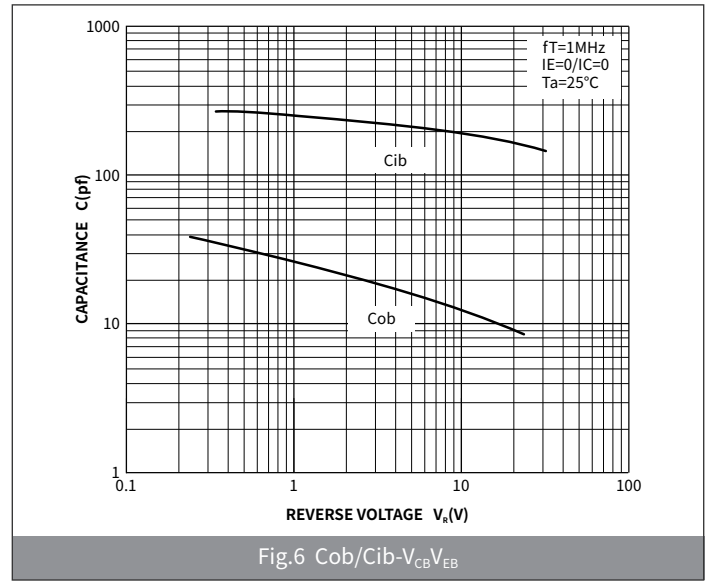
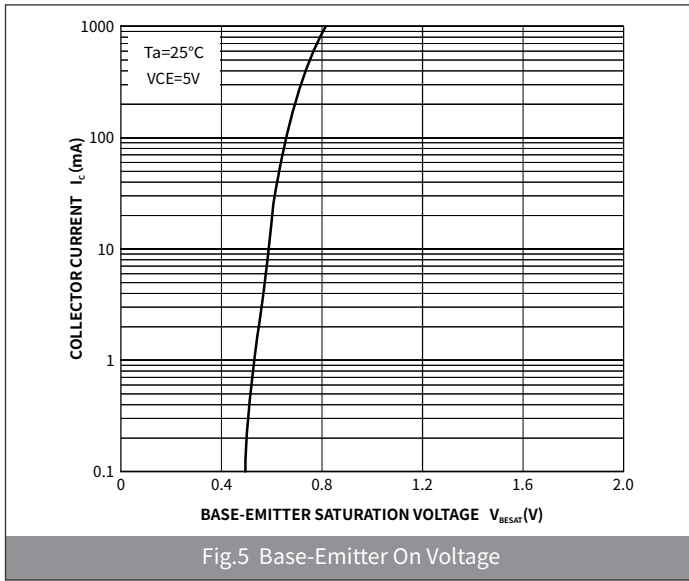
● **Ordering Information**

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

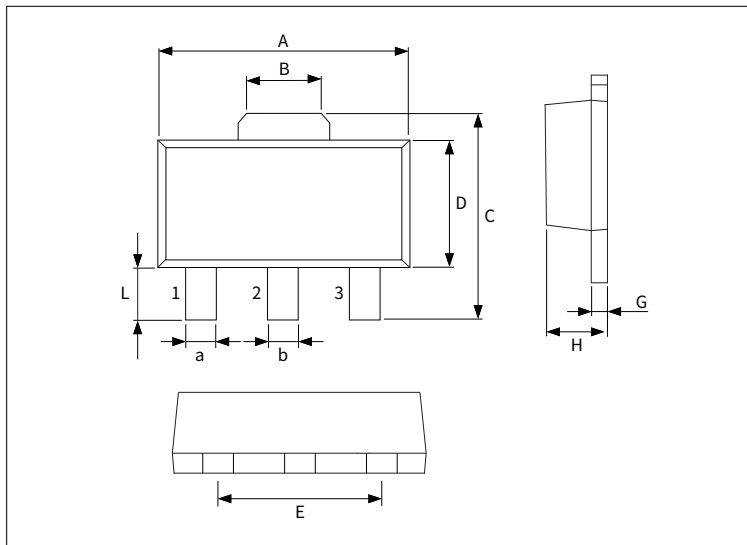
● **Ratings And Characteristics Curves** ( $T_a=25^\circ C$  Unless otherwise specified)



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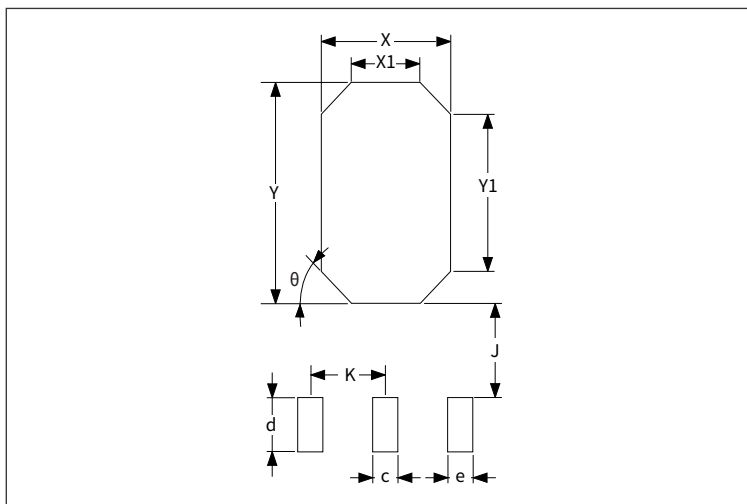


● **Package Outline Dimensions (SOT-89)**



Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.4	4.6	0.176	0.184
B	1.6	1.8	0.064	0.072
C	3.9	4.1	0.156	0.164
D	2.4	2.6	0.096	0.104
E	2.9	3.1	0.116	0.124
a	0.41	0.43	0.0164	0.018
b	0.35	0.45	0.014	0.018
L	0.95	1.05	0.037	0.041
G	0.3	0.5	0.012	0.020
H	1.4	1.5	0.055	0.059

● **Suggested Pad Layout**



Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
c	0.80	1.00	0.032	0.04
d	1.30	1.50	0.052	0.060
e	0.70	0.90	0.028	0.036
J	1.80	2.00	0.072	0.080
K	1.40	1.60	0.056	0.064
X	2.50	2.70	0.100	0.108
X1	1.30	1.50	0.052	0.060
Y	4.30	4.50	0.172	0.180
Y1	3.10	3.30	0.124	0.132
$\theta$	-	45°	-	45°