

SOT-89 Plastic-Encapsulate Transistors

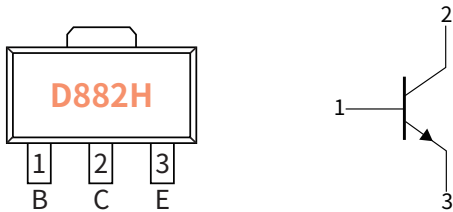
Features

- Switching and amplification in high voltage
- Applications such as telephony
- Power dissipation of 500mW
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

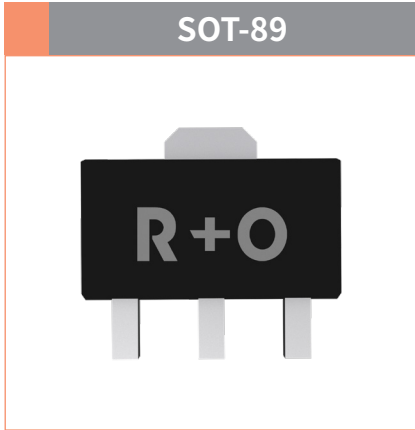
Mechanical Data

- 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 70V
Collector Current
3.0 Ampere



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

PARAMETER	SYMBOL	UNIT	VALUE
Collector-Base Voltage	VCBO	V	70
Collector-Emitter Voltage	VCEO		70
Emitter-Base Voltage	VEBO		6.0
Collector Current	IC	A	3.0
Collector Power Dissipation	PC	mW	500
Storage temperature	Tstg	°C	-55 ~+150
Junction temperature	Tj	°C	-55 ~+150
Typical Thermal Resistance	RθJA	°C /W	250

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

PARAMETER	SYMBOL	UNIT	Condition	Min	Type	Max
Collector-Base Breakdown Voltage	V(BR)CBO	V	IC=100μA, IE=0	70	—	—
Collector-Emitter Breakdown Voltage	V(BR)CEO		IC=10mA, IB=0	70	—	—
Emitter-Base Breakdown Voltage	V(BR)EBO		IE=100μA, IC=0	6.0	—	—
Collector-Emitter cut-off current	ICEO	μA	VCE=30V, IB=0	—	—	10
Collector-Base cut-off current	ICBO		VCB=40V, IE=0	—	—	1.0
Emitter-Base cut-off current	IEBO		VEB=6.0V, IC=0	—	—	1.0
DC Current Gain	hFE(1)	—	IC=1.0A VCE=2.0V	160	—	320
	hFE(2)		IC=3.0mA VCE=2.0V	30	—	—
Collector-Emitter Saturation Voltage	VCE(sat)	V	IC=2.0A IB=0.2A	—	—	0.5
Base-Emitter Saturation Voltage	VBE(sat)	V	IC=2.0A IB=0.2A	—	—	1.5

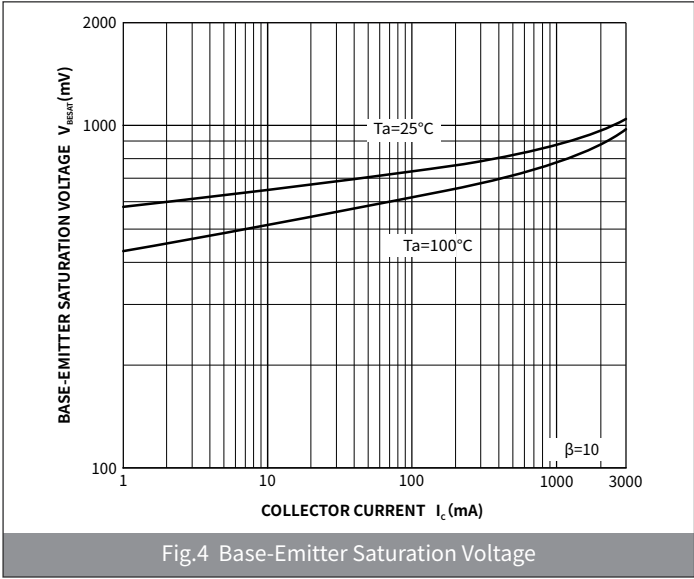
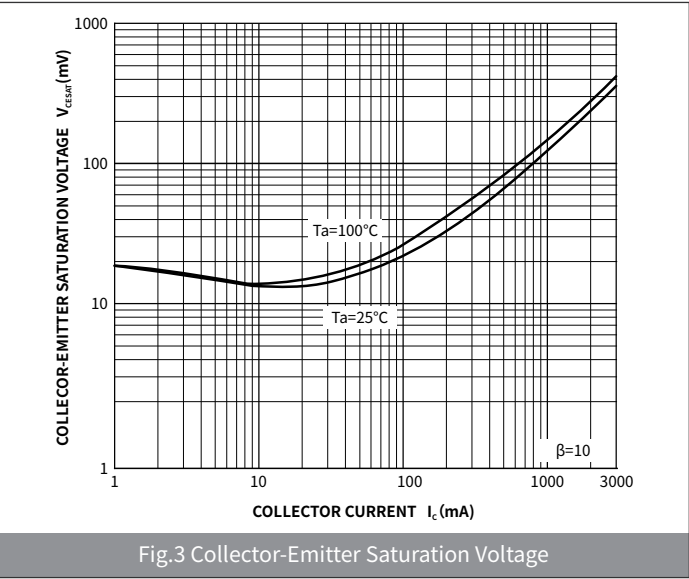
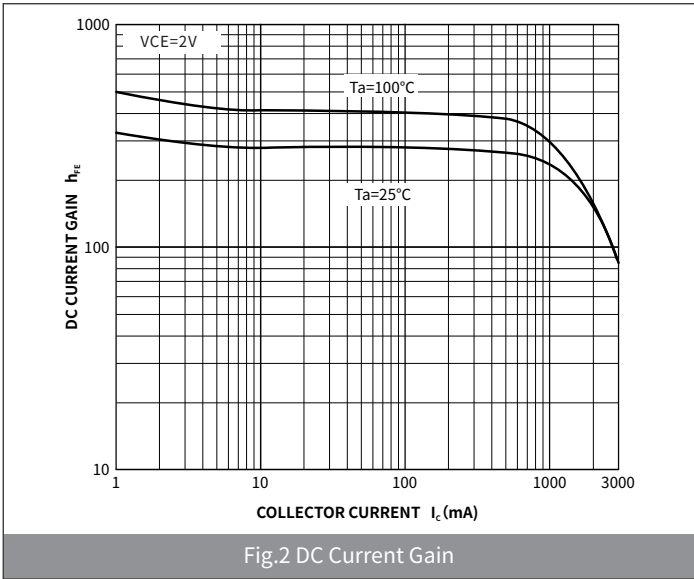
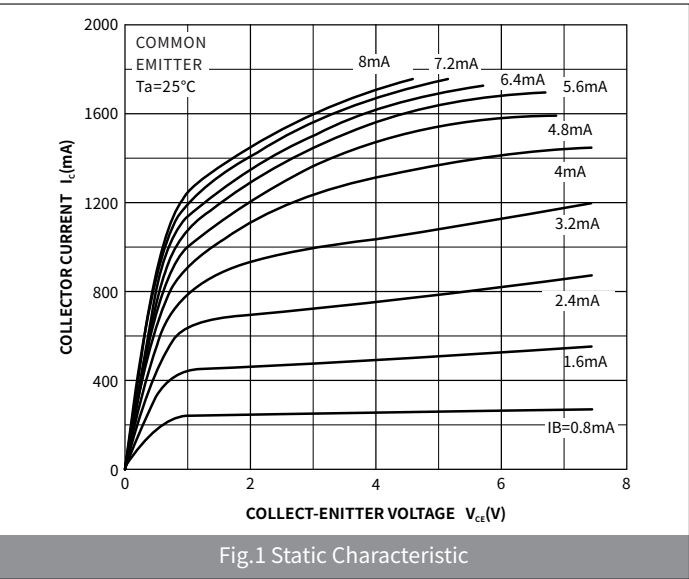
● Small-signal Characteristics

ITEM	SYMBOL	Condition	UNIT	Min	Typ	Max
Transition frequency	f_T	$I_C=0.1A, V_{CE}=5.0V, f=10MHz$	MHz	50	—	—

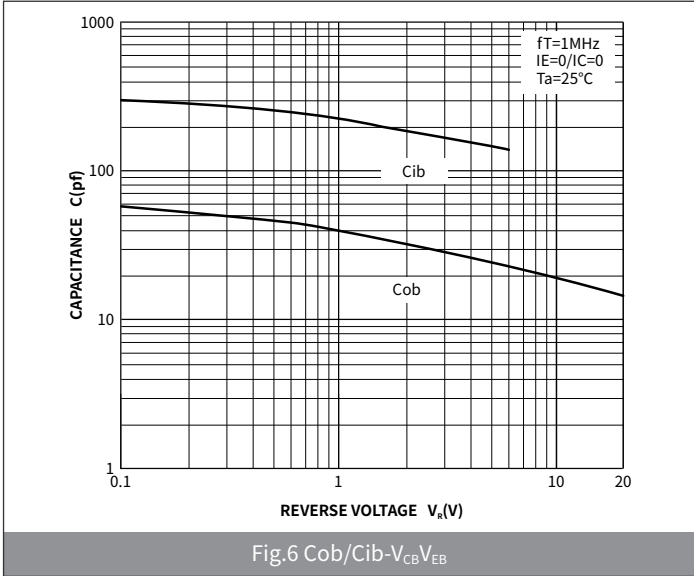
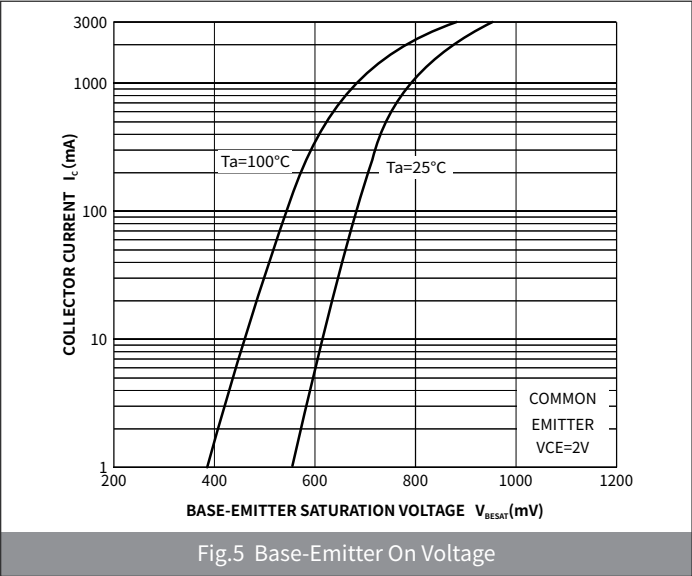
● Ordering Information

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

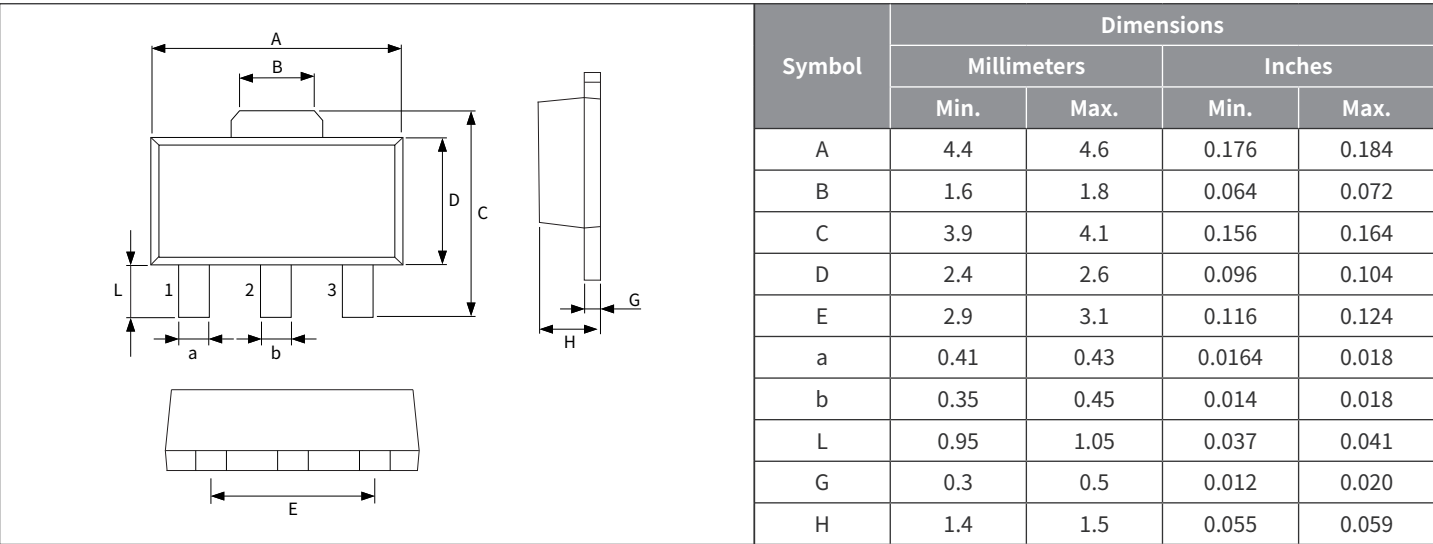
● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



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● Package Outline Dimensions (SOT-89)



● Suggested Pad Layout

