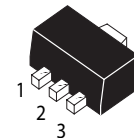


Epitaxial Planar PNP Transistors
(Pb) Lead(Pb)-Free

SOT-89

1. BASE
2. COLLECTOR
3. EMITTER

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Rating	Symbol	Limits	Unit
Collector-Base Voltage	V _{CB0}	-20	Vdc
Collector-Emitter Voltage	V _{CEO}	-20	Vdc
Emitter-Base Voltage	V _{EBO}	-6	Vdc
Collector Current	I _C	-3	A(DC)
	I _{CP}	-5	A (Pulse)*
Collector Power Dissipation	P _D	0.6	W
Junction Temperature, Storage Temperature	T _j , T _{stg}	150, -55 to +150	°C

* Single pulse Pw = 10ms

ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise noted)

Parameter	Symbol	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage(I _C =-50mA)	BV _{CB0}	-20	-	-	V
Collector-Emitter Breakdown Voltage(I _C =-1mA)	BV _{CEO}	-20	-	-	V
Emitter-Base Breakdown Voltage (I _E =-50mA)	BV _{EBO}	-6	-	-	V
Collector Cutoff Current(V _{CB} =-20V)	I _{CBO}	-	-	-0.1	mA
Emitter Cutoff Current(V _{EB} =-5V)	I _{EBO}	-	-	-0.1	mA

ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise noted) (Countinued)

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
DC Current Transfer Ratio	$V_{CE(sat)}$	-	-	-0.5	V	$I_c / I_B = -2A / -0.1A$
Collector-Emitter Saturation Voltage	h_{FE}	120	-	390	-	$V_{CE} = -2V, I_c = -0.1A$
Transition Frequency	f_T	-	240	-	MHz	$V_{CE} = -2V, I_E = 0.5A, f = 100MHz$
Output Capacitance	Cob	-	35	-	pF	$V_{CB} = -10V, I_E = 0A, f = 1MHz$

CLASSIFICATION OF h_{FE}

Marking	AEQ	AER
Rank	Q	R
Range	120-270	180-390

ELECTRICAL CHARACTERISTIC CURVES

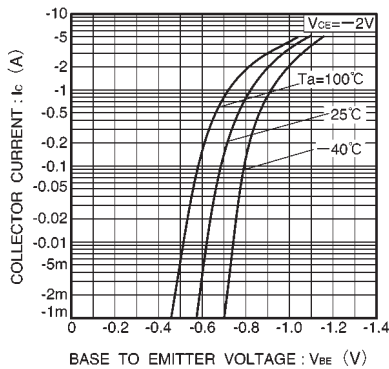


Fig.1 Grounded emitter propagation characteristics

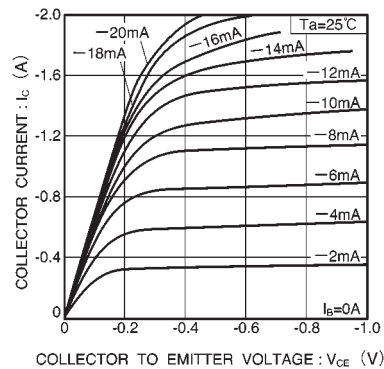


Fig.2 Grounded emitter output characteristics (I)

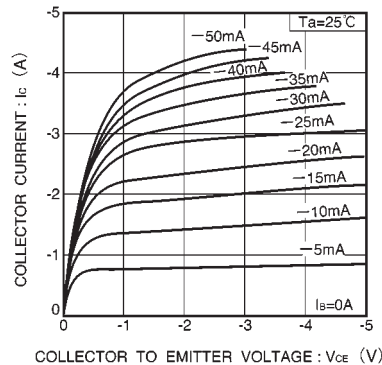


Fig.3 Grounded emitter output characteristics (II)

ELECTRICAL CHARACTERISTIC CURVES

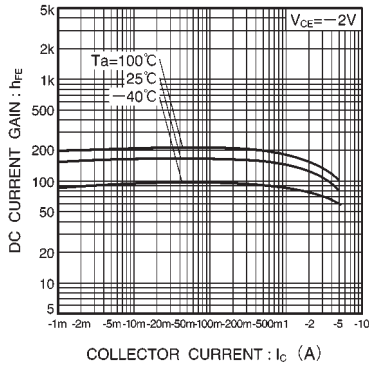


Fig.4 DC current gain vs. collector current

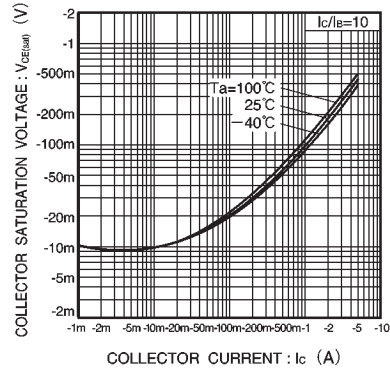


Fig.5 Collector-emitter saturation voltage vs. collector current (I)

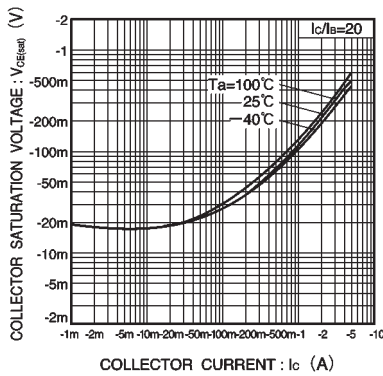


Fig.6 Collector-emitter saturation voltage vs. collector current (II)

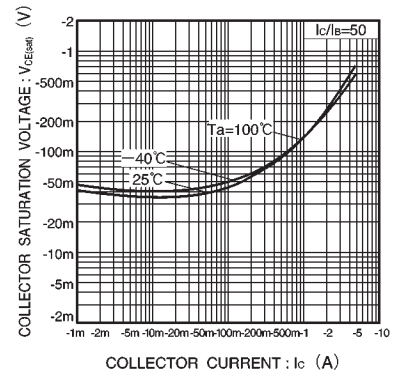


Fig.7 Collector-emitter saturation voltage vs. collector current (III)

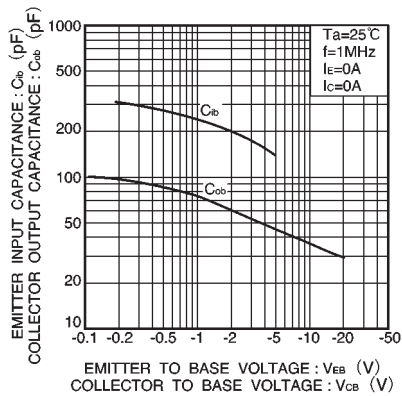


Fig.8 Gain bandwidth product vs. emitter current
Collector output capacitance vs. collector-base voltage

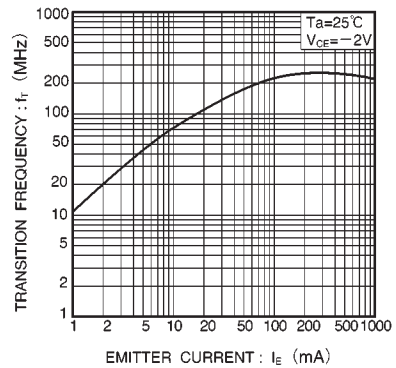
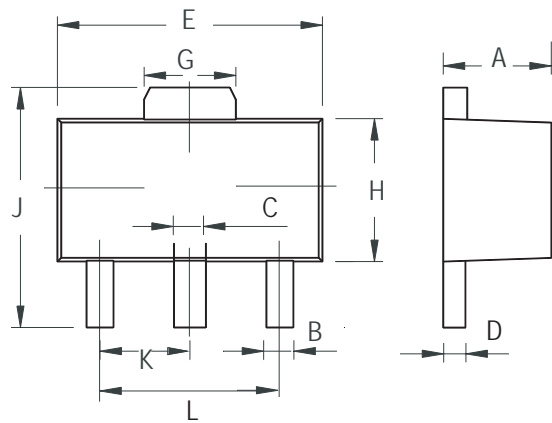


Fig.9 Emitter input capacitance vs. emitter base voltage

SOT-89 Outline Dimensions

unit:mm



SOT-89		
Dim	Min	Max
A	1.400	1.600
B	0.320	0.520
C	0.360	0.560
D	0.350	0.440
E	4.400	4.600
G	1.400	1.800
H	2.300	2.600
J	3.940	4.250
K	1.500TYP	
L	2.900	3.100