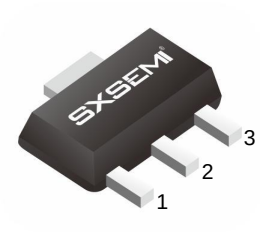
FEATURES

- Low saturation voltage
- High speed switching time
- Complementary to KTA1666

SOT-89-3L



1. BASE
2. COLLECTOR
3. EMITTER

MARKING:UO;UY

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	2	A
P_C	Collector Power Dissipation	500	mW
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~150	℃

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

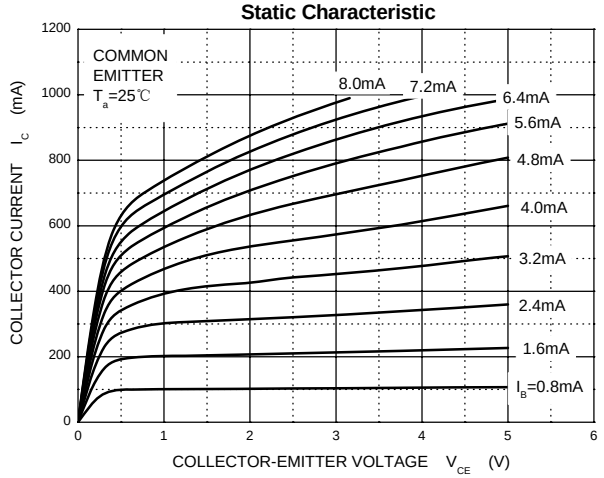
Parameter		Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage		$V_{(BR)CBO}$	I_C=1mA, I_E=0	50			V
Collector-emitter breakdown voltage		$V_{(BR)CEO}$	I_C=10mA, I_B=0	50			V
Emitter-base breakdown voltage		$V_{(BR)EBO}$	I_E=1mA, I_C=0	5			V
Collector cut-off current		I_{CBO}	V_{CB}=50V, I_E=0			0.1	μA
Emitter cut-off current		I_{EBO}	V_{EB}=5V, I_C=0			0.1	μA
DC current gain		$h_{FE(1)}$	V_{CE}=2V, I_C=500mA	70		240	
		$h_{FE(2)}$	V_{CE}=2V, I_C=1.5A	40			
Collector-emitter saturation voltage		$V_{CE(sat)}$	I_C=1A, I_B=50mA			0.5	V
Base-emitter saturation voltage		$V_{BE(sat)}$	I_C=1A, I_B=50mA			1.2	V
Transition frequency		f_T	V_{CE}=2V, I_C=500mA		120		MHz
Collector output capacitance		C_{ob}	V_{CB}=10V, I_E=0, f=1MHz		30		pF
Switching Time	Turn on Time	t_{on}	V_{CC}=30V, I_C=1A, I_{B1}=-I_{B2}=-0.05A		0.1		μs
	Storage Time	t_{stg}			1.0		
	Fall Time	t_f			0.1		

CLASSIFICATION OF $h_{FE(1)}$

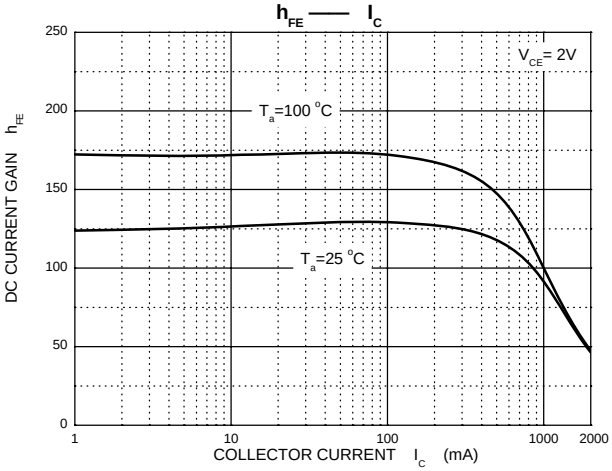
Rank	O	Y
Range	70-140	120-240

Typical Characteristics

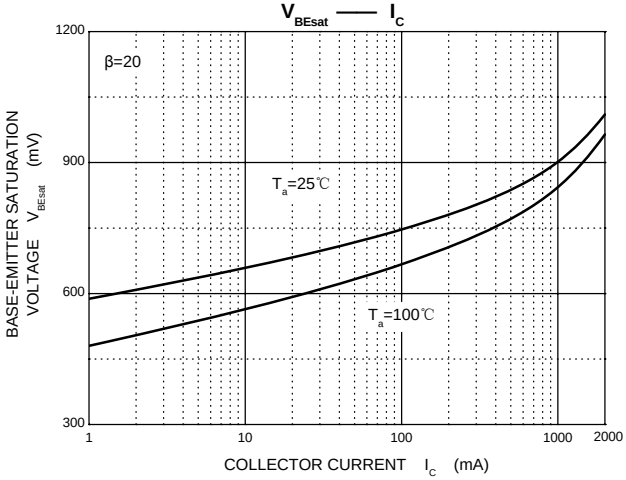
Static Characteristic



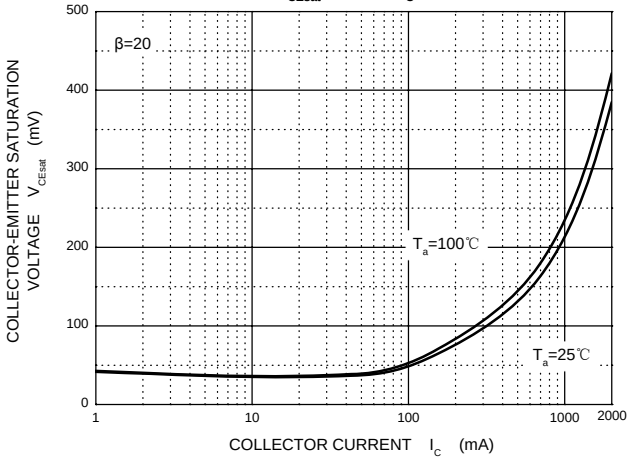
h_{FE} —— I_C



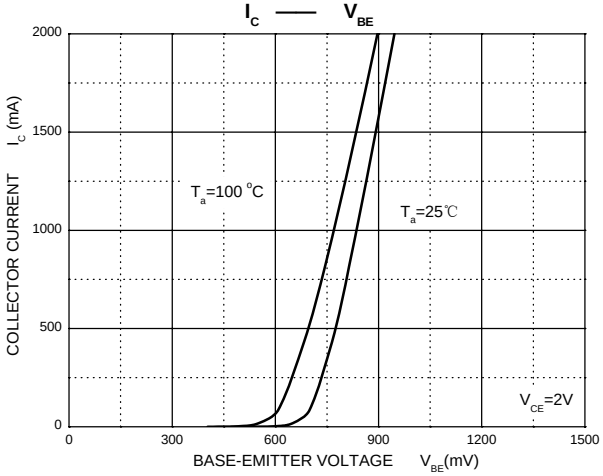
V_{BEsat} —— I_C



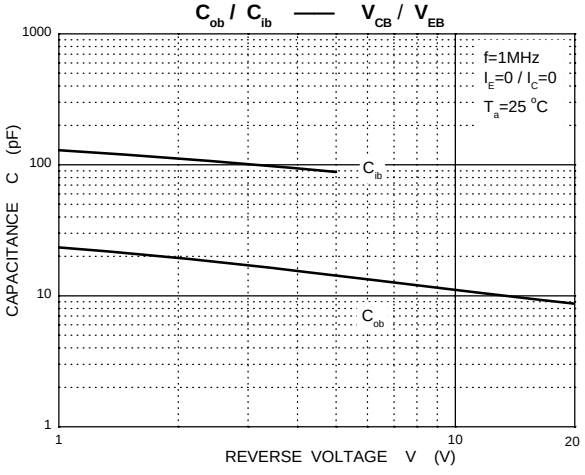
V_{CEsat} —— I_C



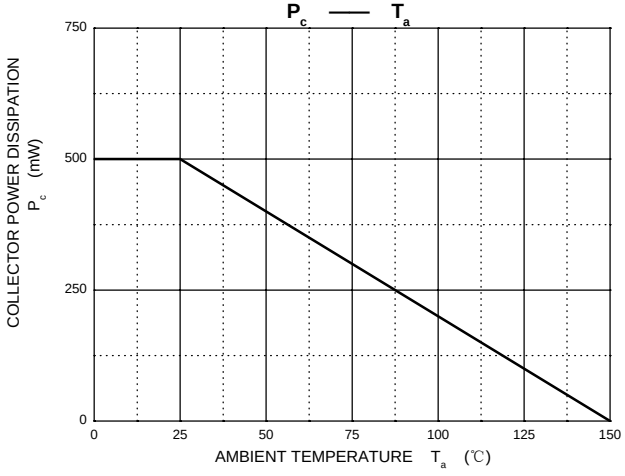
I_C —— V_{BE}



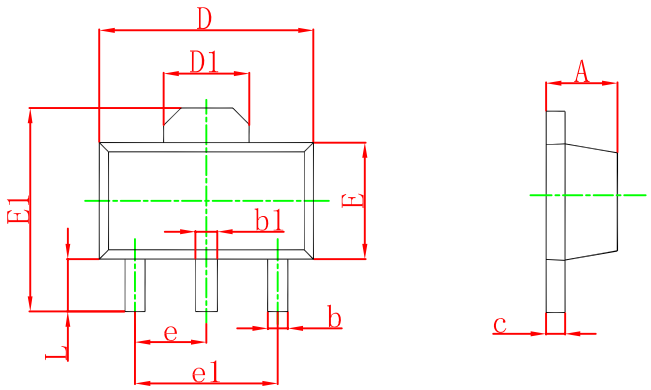
C_{ob} / C_{ib} —— V_{CB} / V_{EB}



P_c —— T_a

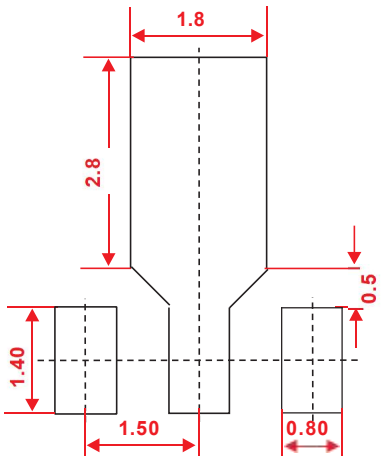


SOT-89-3L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047

SOT-89-3L Suggested Pad Layout



Note:
1.Controlling dimension:In millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.