

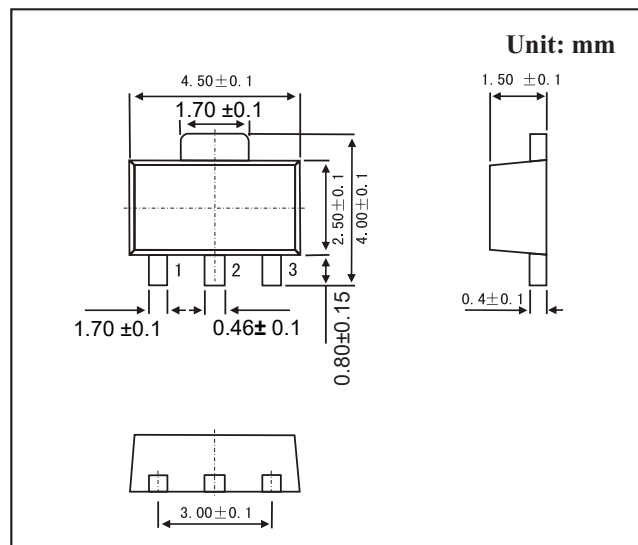
SOT-89 Plastic-Encapsulate Transistors

Features

- Small Flat Package
- General Purpose Application
- NPN Transistors

MECHANICAL DATA

- Case style: SOT-89 molded plastic
- Mounting position: any



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	100	V
Collector - Emitter Voltage	V_{CEO}	80	
Emitter - Base Voltage	V_{EBO}	5	
Collector Current - Continuous	I_C	1	A
Collector Power Dissipation	P_C	500	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	250	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{stg}	-55 to 150	

PACKAGE INFORMATION

Device	Package	Shipping
KTD1898	SOT-89	1000/Tape&Reel

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_C = 100 \mu A, I_E = 0$	100			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = 1 mA, I_B = 0$	80			
Emitter - base breakdown voltage	V_{EBO}	$I_E = 100 \mu A, I_C = 0$	5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 80 V, I_E = 0$			1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 4 V, I_C = 0$			1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500 mA, I_B = 20 mA$			0.4	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500 mA, I_B = 20 mA$			1	
DC current gain	h_{FE}	$V_{CE} = 3 V, I_C = 500 mA$	70		400	
Collector output capacitance	C_{ob}	$V_{CB} = 10 V, I_E = 0, f = 1 MHz$		20		pF
Transition frequency	f_T	$V_{CE} = 10 V, I_C = 50 mA, f = 100 MHz$		100		MHz

Classification of h_{FE}

Type	KTD1898-O	KTD1898-Y	KTD1898-G
Range	70-140	120-240	200-400
Marking	ZO	ZY	ZG

RATINGS AND CHARACTERISTIC CURVES

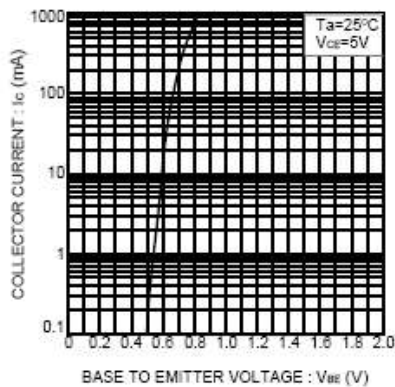


Fig.1 Grounded emitter propagation characteristics

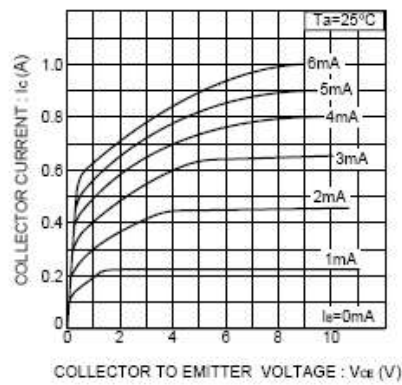


Fig.2 Grounded emitter output characteristics

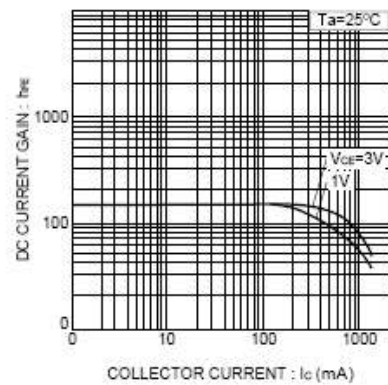


Fig.3 DC current gain vs. collector current

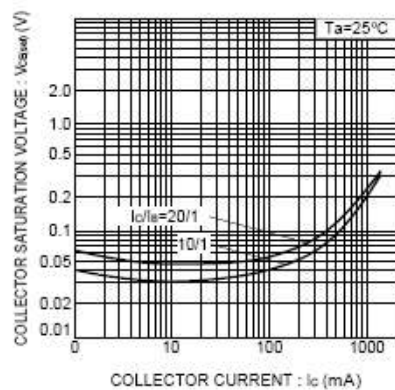


Fig.4 Collector-emitter saturation voltage vs. collector current

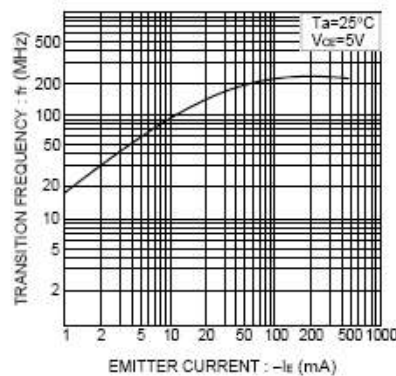


Fig.5 Gain bandwidth product vs. emitter current

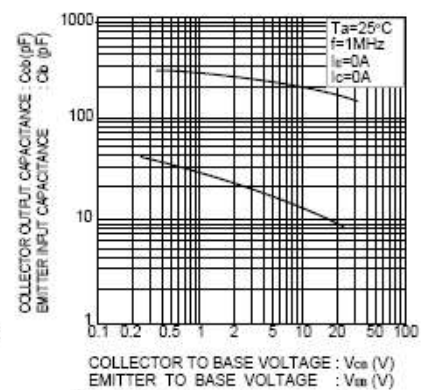


Fig.6 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

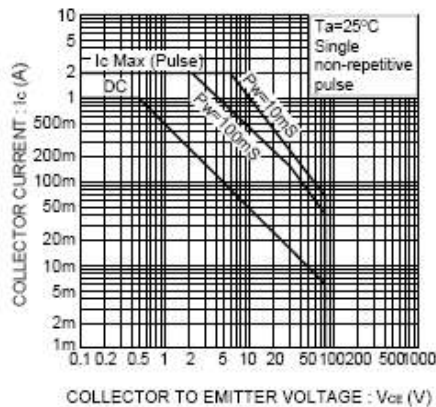


Fig.8 Safe operating area