

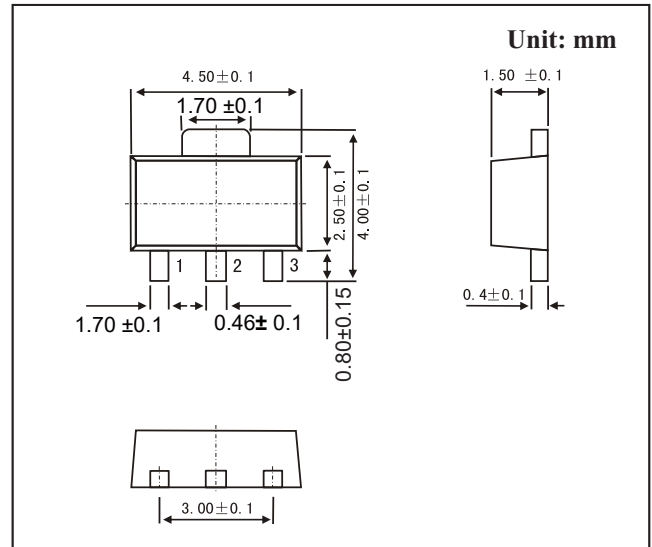
SOT-89 Plastic-Encapsulate Transistors

Features

- Small Flat Package
- Low Saturation Voltage
- Power Amplifier and Switching Application
- Complementary to KTC4379
- PNP 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_{CB0}	-50	V
Collector - Emitter Voltage	V_{CE0}	-50	
Emitter - Base Voltage	V_{EB0}	-5	
Collector Current - Continuous	I_C	-2	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
2SD1666	SOT-89	1000/Tape&Reel

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_C = -1 \text{ mA}, I_E = 0$	-50			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = -10 \text{ mA}, I_B = 0$	-50			
Emitter - base breakdown voltage	V_{EB0}	$I_E = -1 \text{ mA}, I_C = 0$	-5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = -50 \text{ V}, I_E = 0$			-0.1	uA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5 \text{ V}, I_C = 0$			-0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -1 \text{ A}, I_B = -20 \text{ mA}$ (Note.1)			-0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = -1 \text{ A}, I_B = -20 \text{ mA}$ (Note.1)			-1.2	
DC current gain	h_{FE}	$V_{CE} = -2 \text{ V}, I_C = -500 \text{ mA}$	70		240	
		$V_{CE} = -2 \text{ V}, I_C = -1.5 \text{ A}$	40			
Collector output capacitance	C_{ob}	$V_{CB} = -10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$			40	pF
Transition frequency	f_T	$V_{CE} = -2 \text{ V}, I_C = -500 \text{ mA}$		120		MHz

Note.1: Pulse test: pulse width $\leq 300 \text{ uS}$, duty cycle $\leq 2.0\%$.

Classification of $h_{FE(1)}$

Type	KTA1666-O	KTA1666-Y
Range	70-140	120-240
Marking	WO	WY

RATINGS AND CHARACTERISTIC CURVES

■ Typical Characteristics

