

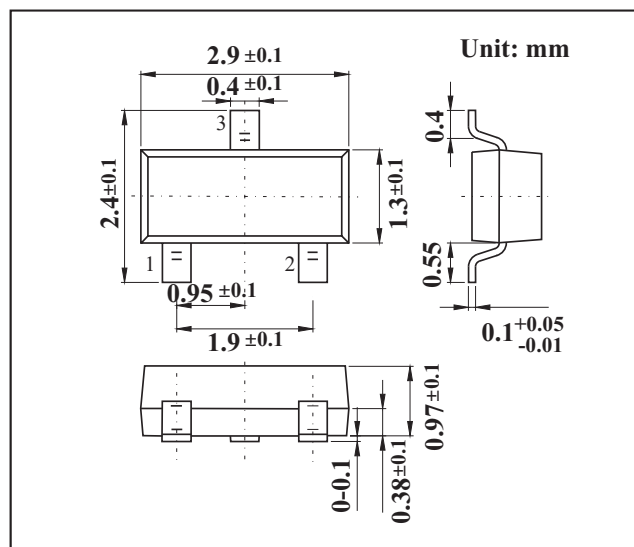
SOT-23 Plastic-Encapsulate Transistors

FEATURES

- Power Dissipation of 300mW
- High Stability and High Reliability
- Epitaxial planar die construction
- NPN General Purpose Amplifier

MECHANICAL DATA

- Case style:SOT-23 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}	75	V
Collector - Emitter Voltage	V_{CEO}	40	
Emitter - Base Voltage	V_{EBO}	6	
Collector Current - Continuous	I_C	600	mA
Collector Power Dissipation	P_D	300	mW
Thermal resistance from junction to ambient	$R_{\theta JA}$	417	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{stg}	-55 ~ +150	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	75			V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	40			V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	6			V
Collector cutoff current	I_{CBO}	$V_{CE}=30V, V_{EB(off)}=3V$			10	nA
Collector cut-off current	I_{CEX}	$V_{CB}=60V, I_E=0$			10	nA
Emitter cutoff current	I_{EBO}	$V_{EB}=3V, I_C=0$			100	nA
DC current gain	h_{FE}	$V_{CE}=10V, I_C=150mA$	100		300	
		$V_{CE}=10V, I_C=0.1mA$	40			
		$V_{CE}=10V, I_C=500mA$	42			
collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$			1.00	V
		$I_C=150mA, I_B=15mA$			0.3	V
base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=500mA, I_B=50mA$			2	V
		$I_C=150mA, I_B=15mA$			1.2	V
Transition frequency	f_T	$V_{CE}=20V, I_C=20mA, f=100MHz$	300			MHz
Delay time	t_d	$V_{CC}=30V, V_{BE(off)}=-0.5V, I_C=150mA, I_{B1}=15mA$			10	ns
Rise time	t_r				25	ns
Storage time	t_s	$V_{CC}=30V, I_C=150mA, I_{B1}=I_{B2}=15mA$			225	ns
Fall time	t_f				60	ns

RATINGS AND CHARACTERISTIC CURVES

