

SPTECH Silicon NPN Power Transistor

2SC1969

DESCRIPTION

- High Power Gain-
: $G_{pe} \geq 12\text{dB}$, $f = 27\text{MHz}$, $P_O = 16\text{W}$
- High Reliability

APPLICATIONS

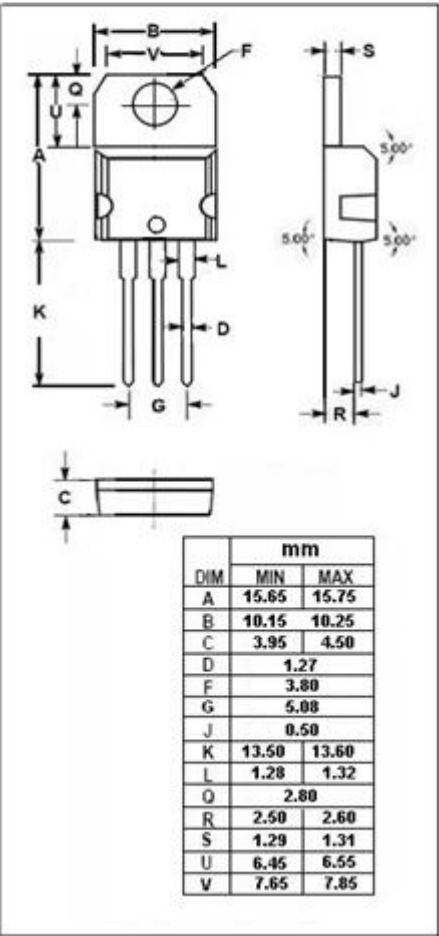
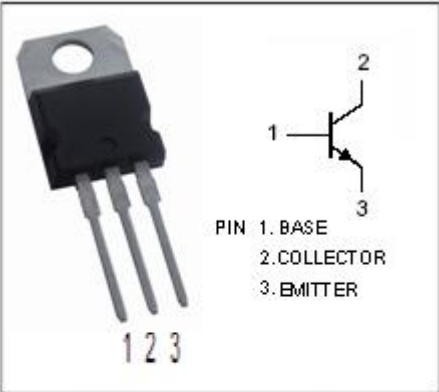
- Designed for 10~14 watts output power class AB amplifiers applications in HF band.

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage $R_{BE} = \infty$	25	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	6	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	20	W
	Collector Power Dissipation @ $T_a = 25^\circ\text{C}$	1.7	
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	73.5	$^\circ\text{C/W}$
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	6.25	$^\circ\text{C/W}$



SPTECH Silicon NPN Power Transistor**2SC1969****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=1\text{mA}, I_E=0$	60			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=10\text{mA}; R_{BE}=\infty$	25			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=5\text{mA}, I_C=0$	5			V
I_{CBO}	Collector Cutoff Current	$V_{CB}=30\text{V}; I_E=0$			0.1	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=4\text{V}; I_C=0$			0.1	mA
h_{FE}	DC Current Gain	$I_C=10\text{mA}; V_{CE}=12\text{V}$	10		180	
P_O	Output Power	$V_{CC}=12\text{V}; P_{in}=1\text{W}; f=27\text{MHz}$	16	18		W
η_C	Collector Efficiency		60	70		%

◆ **h_{FE} Classifications**

X	A	B	C	D
10-25	20-45	35-70	55-110	90-180