

ISC Silicon NPN Power Transistor

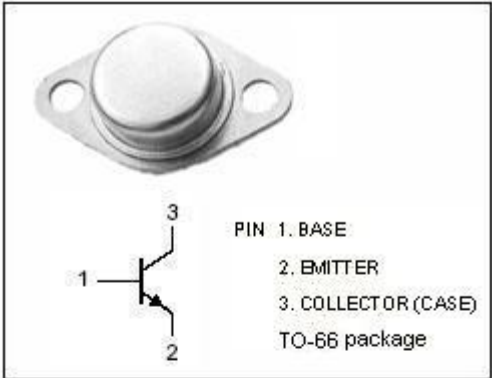
2SC2239

DESCRIPTION

- Collector-Emitter Breakdown Voltage
: $V_{(BR)CEO}=160V(\text{Min})$
- Good Linearity of h_{FE}

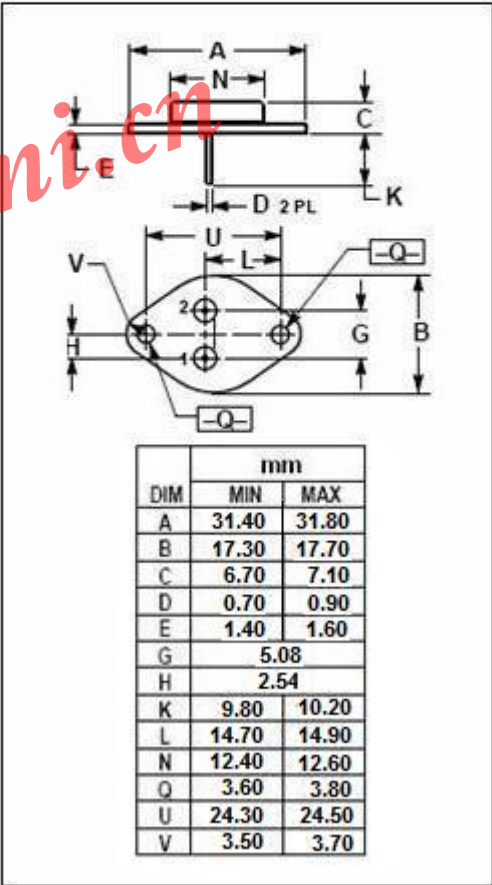
APPLICATIONS

- Power amplifier applications
- Driver stage amplifier applications



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	160	V
V_{CEO}	Collector-Emitter Voltage	160	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	1.5	A
I_E	Emitter Current- Continuous	-1.5	A
P_C	Total Power Dissipation @ $T_C=25^{\circ}\text{C}$	25	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}\text{C}$



ISC Silicon NPN Power Transistor**2SC2239****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=10\text{mA}$; $I_B=0$	160			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=1\text{mA}$; $I_C=0$	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=0.5\text{A}$; $I_B=50\text{mA}$			1.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=0.5\text{A}$; $V_{CE}=5\text{V}$			1.0	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=160\text{V}$; $I_E=0$			1.0	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}$; $I_C=0$			1.0	μA
h_{FE}	DC Current Gain	$I_C=0.1\text{A}$; $V_{CE}=5\text{V}$	70		240	
C_{OB}	Output Capacitance	$I_E=0$; $V_{CB}=10\text{V}$; $f_{test}=1\text{MHz}$		25		pF
f_T	Current-Gain—Bandwidth Product	$I_C=0.1\text{A}$; $V_{CE}=10\text{V}$		100		MHz

◆ **h_{FE} Classifications**

O	Y
70-140	120-240