

**isc Silicon NPN Power Transistor**

**2SD110**

**DESCRIPTION**

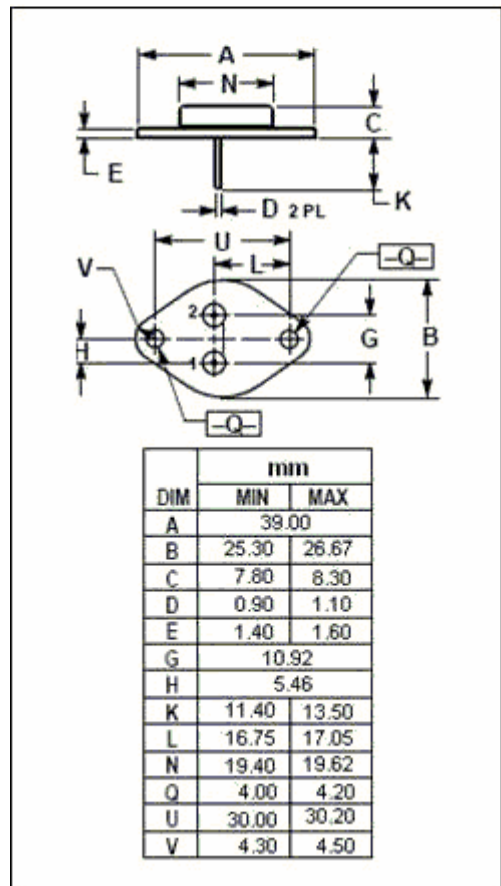
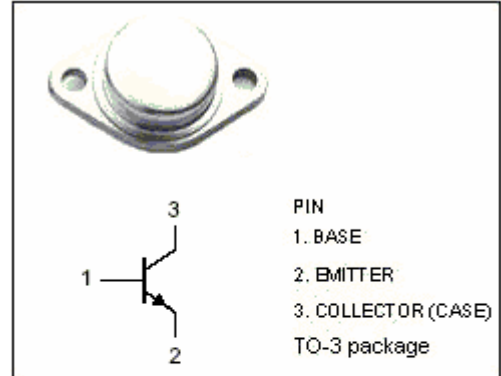
- High Power Dissipation-  
:  $P_C = 100W @ T_C = 25^\circ C$
- High Current Capability-  
:  $I_C = 10A$

**APPLICATIONS**

- Designed for power amplifier , power switching ,DC-DC converter and regulator applications.

**ABSOLUTE MAXIMUM RATINGS( $T_a = 25^\circ C$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	130	V
$V_{CEO}$	Collector-Emitter Voltage	110	V
$V_{EBO}$	Emitter-Base Voltage	10	V
$I_C$	Collector Current-Continuous	10	A
$I_E$	Emitter Current-Continuous	-10	A
$I_B$	Base Current-Continuous	3	A
$P_C$	Collector Power Dissipation @ $T_C = 25^\circ C$	100	W
$T_J$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature	-65~150	$^\circ C$



**isc Silicon NPN Power Transistor****2SD110****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	$I_C=50\text{mA}$ ; $R_{BE}=\infty$	110			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=50\text{mA}$ ; $I_C=0$	10			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}$ ; $I_B=1\text{A}$			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=5\text{A}$ ; $I_B=1\text{A}$			2.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=50\text{V}$ ; $I_E=0$			0.5	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=10\text{V}$ ; $I_C=0$			10	mA
$h_{FE-1}$	DC Current Gain	$I_C=1\text{A}$ ; $V_{CE}=5\text{V}$	30		300	
$h_{FE-2}$	DC Current Gain	$I_C=5\text{A}$ ; $V_{CE}=5\text{V}$	10			
$f_T$	Current-Gain—Bandwidth Product	$I_C=1\text{A}$ ; $V_{CE}=10\text{V}$		1		MHz
$C_{OB}$	Output Capacitance	$I_E=0$ ; $V_{CB}=50\text{V}$ ; $f=1\text{MHz}$		200		pF

◆  **$h_{FE-2}$  Classifications**

R	O	Y
30-90	50-150	100-300