

isc Silicon NPN Power Transistor

2SD256

DESCRIPTION

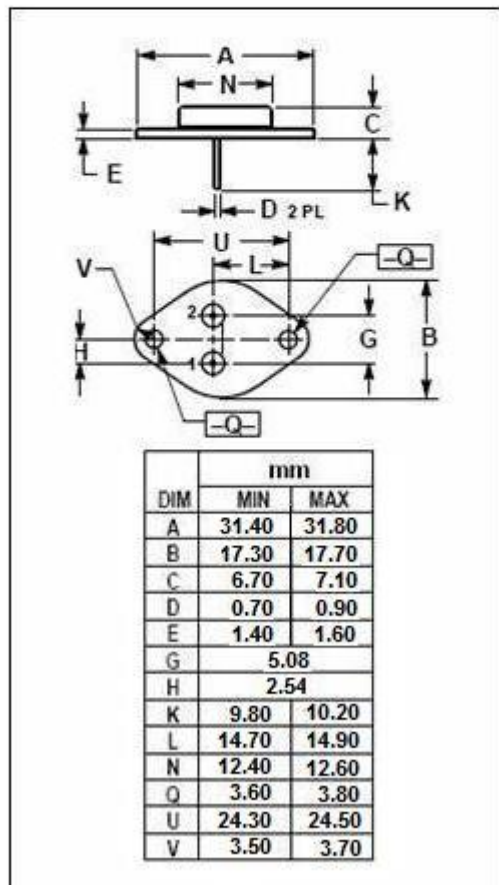
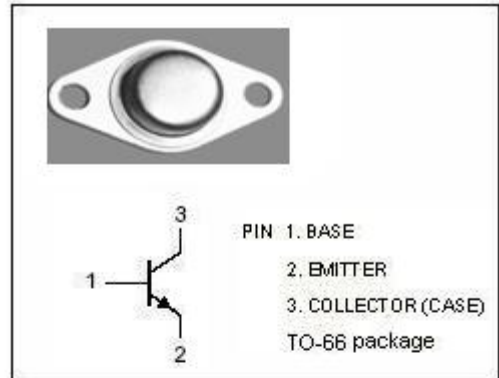
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 40V(\text{Min})$
- Collector Power Dissipation-
: $P_C = 25W @ T_C = 25^\circ C$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for use in general purpose amplifier and switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	4.0	A
I_{CM}	Collector Current-Peak	6.0	A
I_B	Base Current	1.0	A
P_C	Collector Power Dissipation@ $T_C = 25^\circ C$	25	W
T_J	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature	-65~150	$^\circ C$



isc Silicon NPN Power Transistor**2SD256****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEQ(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=30\text{mA}; I_B=0$	40		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=2\text{A}; I_B=0.4\text{A}$		2.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=2\text{A}; V_{CE}=4\text{V}$		1.8	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=60\text{V}; V_{EB}=0$		10	μA
I_{CEO}	Collector Cutoff Current	$V_{CE}=40\text{V}; I_B=0$		0.1	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$		10	μA
h_{FE}	DC Current Gain	$I_C=1\text{A}; V_{CE}=4\text{V}$	40		
f_T	Current-Gain—Bandwidth Product	$I_C=0.2\text{A}; V_{CE}=10\text{V}$	4		MHz

Switching times

t_r	Rise Time	$I_C=2\text{A}; I_{B1}=0.4\text{A}; I_{B2}=-0.1\text{A}$ $R_L=3\Omega; V_{CC}=6\text{V}$		1.2	μs
t_{stg}	Storage Time			1.6	μs
t_f	Fall Time			1.7	μs