

isc Silicon NPN Power Transistor

2SC2616

DESCRIPTION

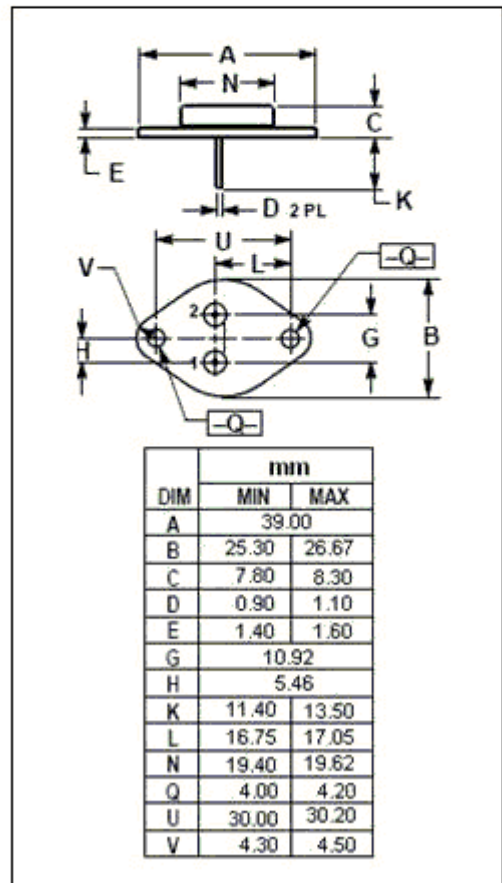
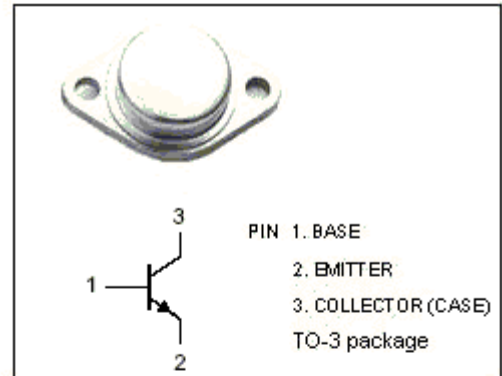
- High Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 400V$  (Min)
- High Switching Speed

APPLICATIONS

- Designed for high voltage, high speed and high power switching applications.

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

SYMBOL	PARAMETER	MAX	UNIT
$V_{CBO}$	Collector-Base Voltage	500	V
$V_{CEO}$	Collector-Emitter Voltage	400	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	10	A
$I_{CM}$	Collector Current-Peak	20	A
$I_B$	Base Current-Continuous	5	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ C$	100	W
$T_j$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ C$



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## ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=0.2\text{A}; R_{BE}=\infty; L=100\text{mH}$	400			V
$V_{CEX(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=5\text{A}; I_{B1}=-I_{B2}=1\text{A}, V_{BE}=-5\text{V}; L=180\mu\text{H, clamped}$	400			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=1\text{A}$			1.2	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=1\text{A}$			1.7	V
$h_{FE-1}$	DC Current Gain	$I_C=5\text{A}; V_{CE}=5\text{V}$	15			
$h_{FE-2}$	DC Current Gain	$I_C=10\text{A}; V_{CE}=5\text{V}$	7			
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=400\text{V}; I_E=0$			0.1	mA
$I_{CEO}$	Collector Cutoff Current	$V_{CE}=350\text{V}; R_{BE}=\infty$			0.1	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			0.1	mA

## Switching Times

$t_r$	Rise Time	$I_C=10\text{A}; I_{B1}=-I_{B2}=2\text{A}, V_{CC}\approx 150\text{V}$			1.0	$\mu\text{s}$
$t_{stg}$	Storage Time				2.5	$\mu\text{s}$
$t_f$	Fall Time				1.0	$\mu\text{s}$