

isc Silicon NPN Power Transistor

2SD1016

DESCRIPTION

- High Collector-Base Voltage-
: $V_{CBO} = 1500V(\text{Min})$
- High Current Capability
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

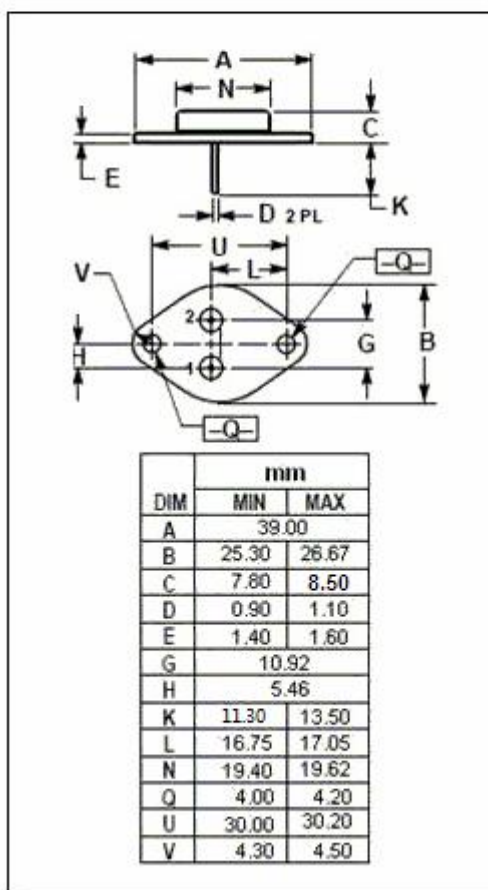
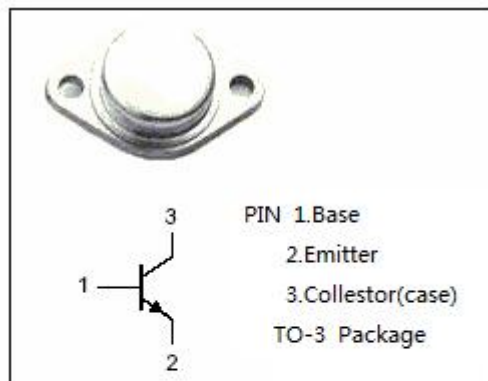
- Designed for use in large screen color deflection circuits .

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	1500	V
V_{CEO}	Collector-Emitter Voltage	800	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	7	A
I_{CM}	Collector Current-Peak	10	A
P_C	Collector Power Dissipation @ $T_c = 25^\circ\text{C}$	50	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.64	$^\circ\text{C/W}$



isc Silicon NPN Power Transistor**2SD1016****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 10mA ; I _B = 0	800			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 4.5A; I _B = 2.0A			1.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 4.5A; I _B = 2.0A			1.3	V
I _{CBO}	Collector Cutoff Current	V _{CB} =1500V; I _E =0 V _{CB} =1500V; I _E =0 ; T _C =125°C			1.0 2.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5.0V ; I _C = 0			0.1	mA
h _{FE1}	DC Current Gain	I _C = 0.1A ; V _{CE} = 5V	6		30	
h _{FE2}	DC Current Gain	I _C = 4A ; V _{CE} = 5V		7		
C _{OB}	Output Capacitance	I _E =0; V _{CB} = 10V; f _{test} = 0.1MHz	125			pF
f _T	Current-Gain—Bandwidth Product	I _C =0.5A; V _{CE} =10V; f _{test} =1.0MHz		7		MHz

Pulsed: Pulse duration ≤300 us, duty cycle ≤1.5 %

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