

**isc Silicon NPN Power Transistor**

**3DD7F**

**DESCRIPTION**

- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 300V(\text{Min})$
- Collector-Emitter Saturation Voltage-  
:  $V_{CE(sat)} = 1.2V(\text{Max}) @ I_C = 3.75A$

**APPLICATIONS**

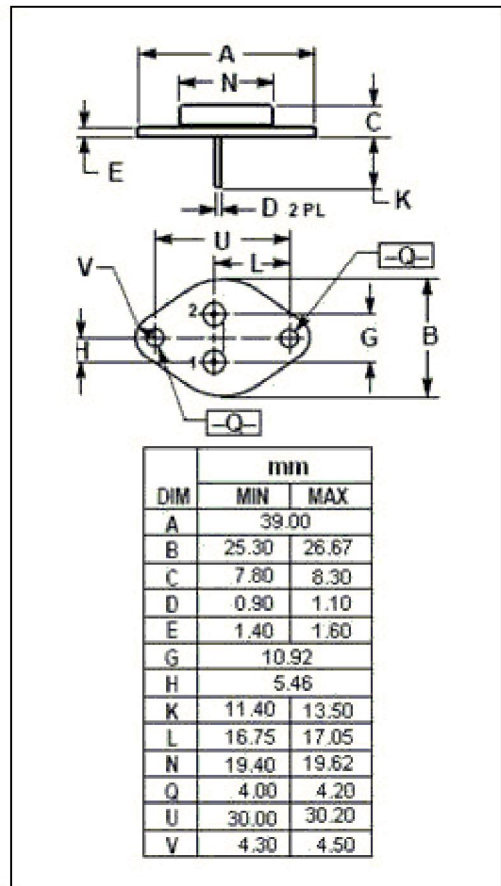
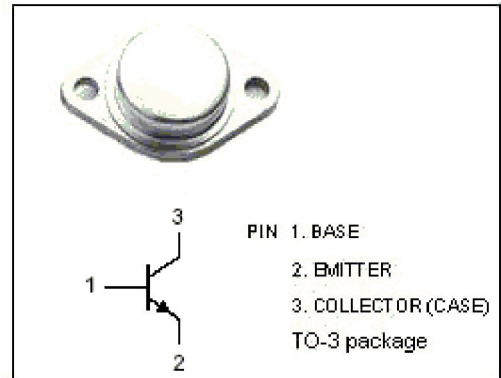
- Designed for power amplifier, low speed switching and regulated power supply applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	400	V
$V_{CEO}$	Collector-Emitter Voltage	300	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current-Continuous	7.5	A
$P_C$	Collector Power Dissipation @ $T_C=75^\circ\text{C}$	75	W
$T_J$	Junction Temperature	175	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~175	$^\circ\text{C}$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.33	$^\circ\text{C/W}$



**isc Silicon NPN Power Transistor****3DD7F****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	$I_C=3\text{mA}; I_B=0$	300			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=2\text{mA}; I_C=0$	5			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=3\text{mA}; I_E=0$	400			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=3.75\text{A}; I_B=0.38\text{A}$			1.2	V
$I_{CEO}$	Collector Cutoff Current	$V_{CE}=30\text{V}; I_B=0$			1.0	mA
$h_{FE}$	DC Current Gain	$I_C=3.75\text{A}; V_{CE}=10\text{V}$	15		180	