

**isc Silicon NPN Power Transistor**
**3DK106**
**DESCRIPTION**

- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 60V(\text{Min.})$
- DC Current Gain-  
:  $h_{FE} = 30 \sim 250(\text{Min.}) @ I_C = 2A$
- Collector-Emitter Saturation Voltage-  
:  $V_{CE(sat)} = 1.5V(\text{Max}) @ I_C = 2.5A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

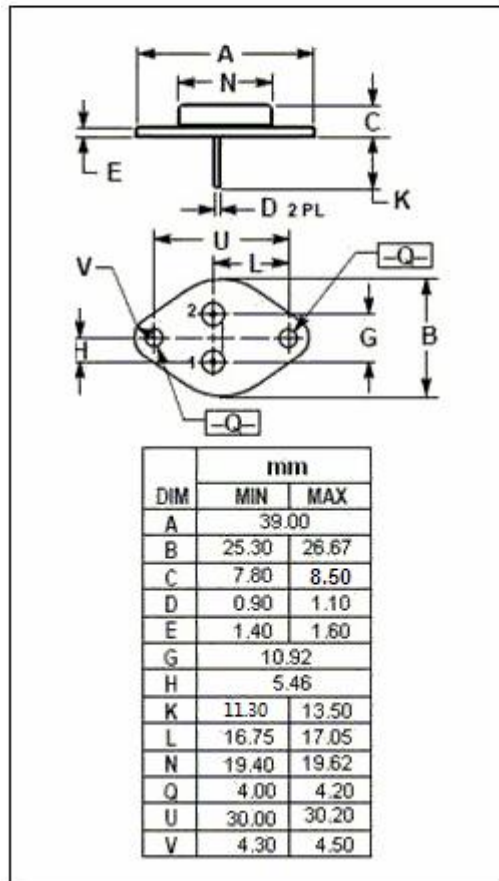
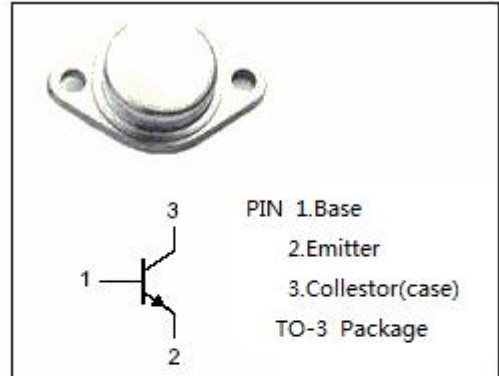
- Designed for B&W TV horizontal output , regulated power supply and power amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	50-200	V
$V_{CEO}$	Collector-Emitter Voltage	50-200	V
$V_{EBO}$	Emitter-Base Voltage	4	V
$I_C$	Collector Current-Continuous	7.5	A
$P_C$	Collector Power Dissipation@ $T_C=75^\circ\text{C}$	50	W
$T_J$	Junction Temperature	175	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~175	$^\circ\text{C}$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	2.0	$^\circ\text{C}/\text{W}$



## isc Silicon NPN Power Transistors

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## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=5\text{mA}; I_B=0$	50-200		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=10\text{mA}; I_C=0$	4		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=2.5\text{A}; I_B=0.25\text{A}$		1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=2.5\text{A}; I_B=0.25\text{A}$		1.2	V
$I_{CEO}$	Collector Cutoff Current	$V_{CE}=20\text{V}; I_B=0$		1.0	mA
$h_{FE}$	DC Current Gain	$I_C=2.5\text{A}; V_{CE}=3\text{V}$	20		

	B	C	D	E	F
$V_{CEO}$	50V	80V	110V	150V	200V

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