

**isc Silicon NPN Power Transistor**

**2SD1301**

**DESCRIPTION**

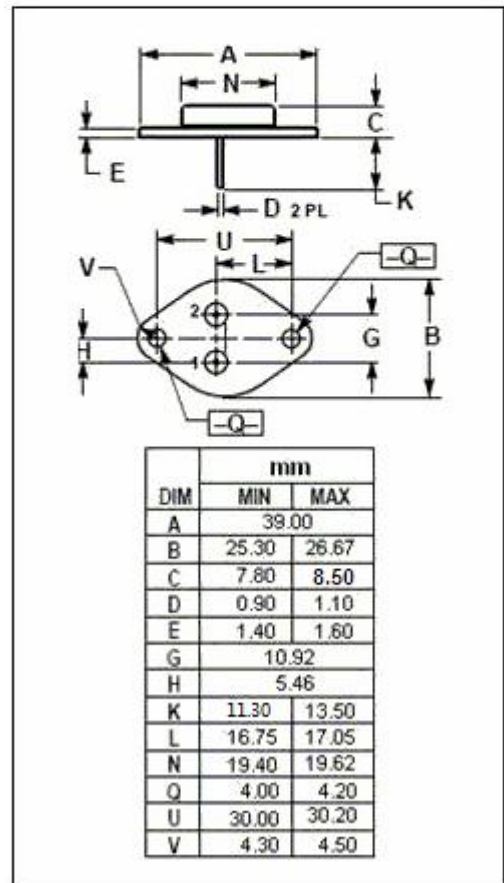
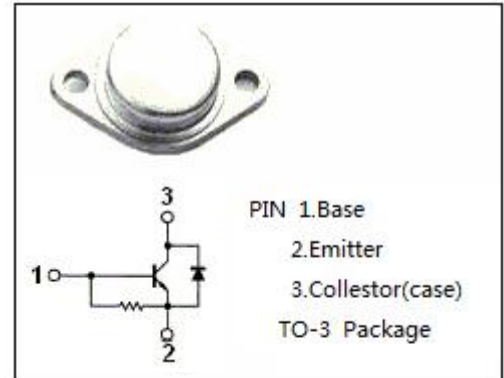
- High Breakdown Voltage-  
:  $V_{CBO} = 1500V$  (Min)
- High Switching Speed
- Low Collector Saturation Voltage-  
:  $V_{CE(sat)} = 3.0V$ (Max.)@  $I_C = 1A$
- Wide area of safe operation
- Built-in Damper Diode
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Designed for color TV horizontal output applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	1500	V
$V_{CES}$	Collector- Emitter Voltage( $V_{BE} = 0$ )	1500	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current- Continuous	2	A
$I_{CM}$	Collector Current-Peak	8	A
$P_C$	Collector Power Dissipation @ $T_C = 25^\circ C$	45	W
$T_J$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature Range	-65~150	$^\circ C$



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**ELECTRICAL CHARACTERISTICS**

 T<sub>c</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = 500mA; I <sub>C</sub> = 0	5.0			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 1A; I <sub>B</sub> = 0.4A			3.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 1A; I <sub>B</sub> = 0.4A			1.5	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 750V; I <sub>E</sub> = 0			50	μ A
		V <sub>CB</sub> = 1500V; I <sub>E</sub> = 0			1	mA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 1A; V <sub>CE</sub> = 10V	3		12	
V <sub>ECF</sub>	C-E Diode Forward Voltage	I <sub>F</sub> = 4A			2.5	V
t <sub>s</sub>	Storage Time	I <sub>C</sub> = 1A, I <sub>Bend</sub> = 0.4A			6.0	μ s
t <sub>f</sub>	Fall Time				0.8	μ s

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