

**isc Silicon NPN Power Transistors**

**2SD5011**

**DESCRIPTION**

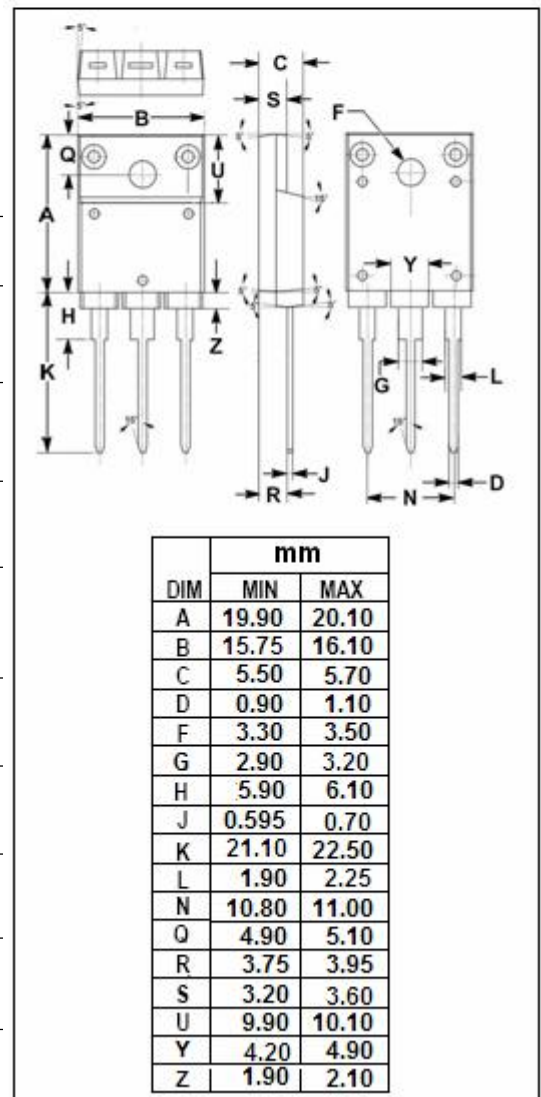
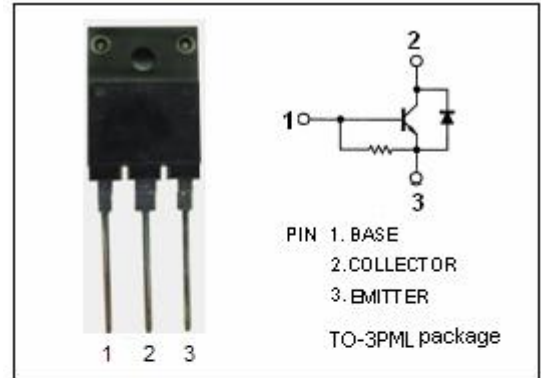
- High Breakdown Voltage-  
:  $V_{CBO} = 1500V$  (Min)
- High Switching Speed
- High Reliability
- Built-in Damper Diode
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Designed for use in horizontal deflection circuits of colour TV receivers.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	1500	V
$V_{CEO}$	Collector-Emitter Voltage	800	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current-Continuous	3.5	A
$I_{CM}$	Collector Current-Peak	10	A
$P_C$	Collector Power Dissipation @ $T_c = 25^\circ C$	50	W
$T_J$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature	-55~150	$^\circ C$



**isc Silicon NPN Power Transistor****2SD5011****ELECTRICAL CHARACTERISTICS****T<sub>c</sub>=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 2.5A; I <sub>B</sub> = 0.8A			8.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 2.5A ;I <sub>B</sub> = 0.8A			1.5	V
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 4V; I <sub>C</sub> =0	40		130	mA
I <sub>CBO</sub>	Collector-Base Cutoff Current	V <sub>CB</sub> =800V; I <sub>E</sub> = 0			10	uA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 0.5A ; V <sub>CE</sub> = 5V	8			
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = 0.5A ; V <sub>CE</sub> = 10V		3		MHz
V <sub>ECF</sub>	C-E Diode Forward Voltage	I <sub>F</sub> = 3.5A			2.0	V
t <sub>f</sub>	Fall Time	I <sub>C</sub> = 3A, I <sub>B1</sub> = 0.8A; I <sub>B2</sub> = -1.6A R <sub>L</sub> = 66.7 Ω ;V <sub>CC</sub> = 200V			0.4	us

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