

isc Silicon NPN Power Transistor

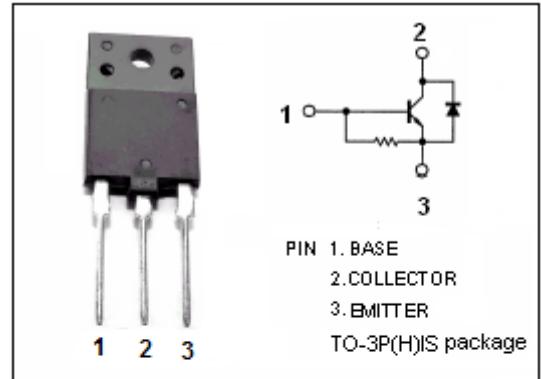
2SD2551

DESCRIPTION

- High Breakdown Voltage-  
:  $V_{CBO} = 1700V$  (Min)
- High Switching Speed
- Low Saturation Voltage
- Built-in Damper Diode

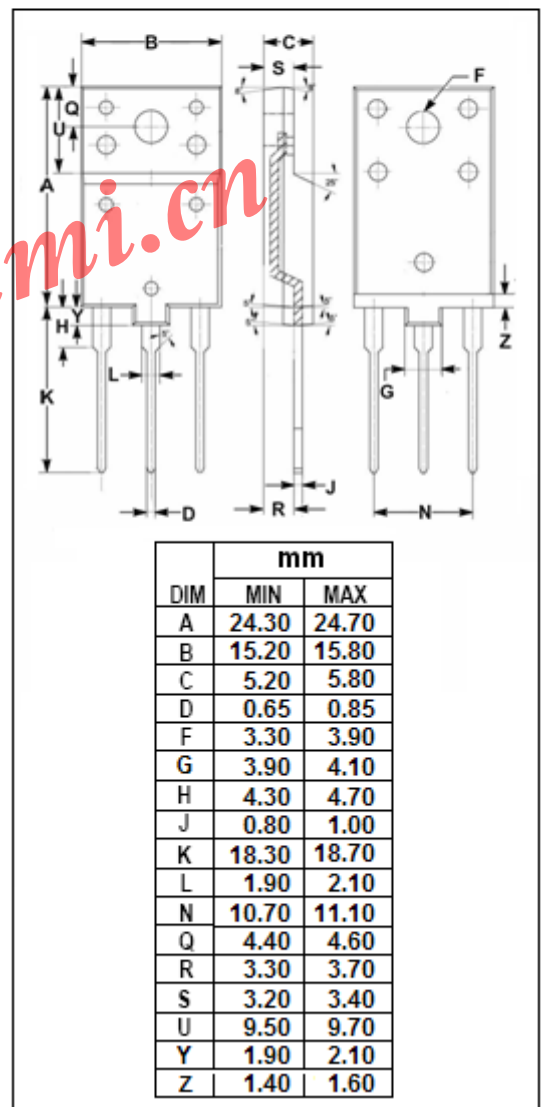
APPLICATIONS

- Designed for color TV horizontal deflection applications.



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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	1700	V
$V_{CEO}$	Collector-Emitter Voltage	600	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current- Continuous	5	A
$I_{CM}$	Collector Current- Pulse	10	A
$I_B$	Base Current- Continuous	2.5	A
$P_C$	Collector Power Dissipation @ $T_C=25^{\circ}C$	50	W
$T_J$	Junction Temperature	150	$^{\circ}C$
$T_{stg}$	Storage Temperature Range	-55~150	$^{\circ}C$



## isc Silicon NPN Power Transistor

## 2SD2551

## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = 300\text{mA}; I_C = 0$	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 4\text{A}; I_B = 0.8\text{A}$			5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 4\text{A}; I_B = 0.8\text{A}$			1.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = 1700\text{V}; I_E = 0$			1.0	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = 5\text{V}; I_C = 0$	66		200	mA
$h_{FE-1}$	DC Current Gain	$I_C = 1\text{A}; V_{CE} = 5\text{V}$	8		28	
$h_{FE-2}$	DC Current Gain	$I_C = 4\text{A}; V_{CE} = 5\text{V}$	5		10	
$V_{ECF}$	C-E Diode Forward Voltage	$I_F = 5\text{A}$			2.0	V
$f_T$	Current-Gain Bandwidth Product	$I_C = 0.1\text{A}; V_{CE} = 10\text{V}$		3		MHz
$C_{OB}$	Output Capacitance	$I_E = 0; V_{CB} = 10\text{V}; f_{test} = 1.0\text{MHz}$		125		pF

## Switching Times

$t_s$	Storage Time	$I_{CP} = 4\text{A}, I_{B1(end)} = 0.8\text{A},$ $f_H = 15.75\text{kHz}$			10	$\mu\text{s}$
$t_f$	Fall Time				1.0	$\mu\text{s}$