

SPTECH Silicon NPN Power Transistor

2SD2253

DESCRIPTION

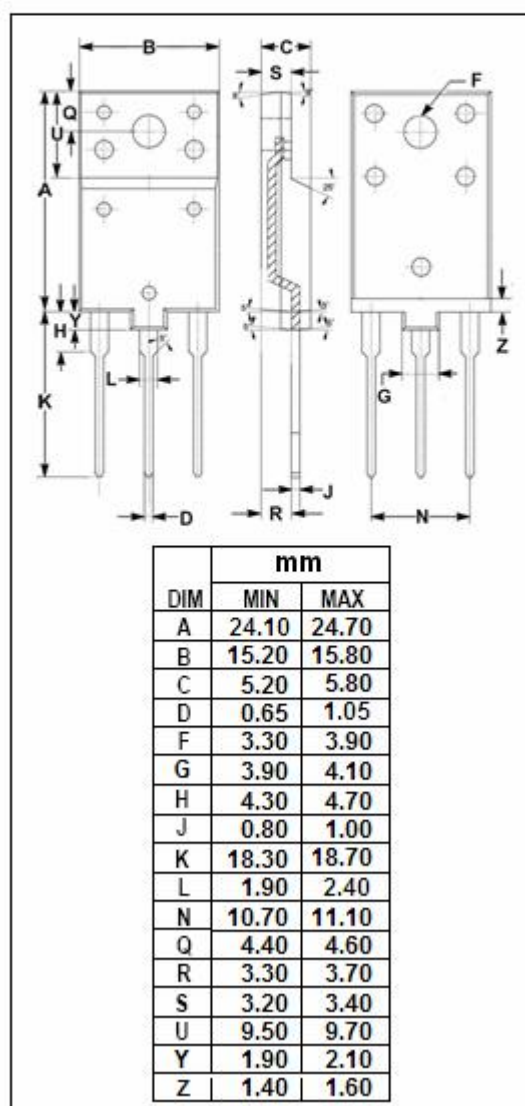
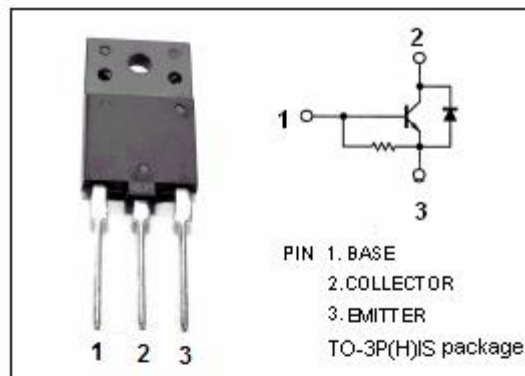
- High Breakdown Voltage-
: $V_{CBO} = 1700V$ (Min)
- High Switching Speed
- Low Saturation Voltage
- Built-in Damper Diode

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	1700	V
V_{CEO}	Collector-Emitter Voltage	600	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current- Continuous	6	A
I_{CP}	Collector Current- Pulse	12	A
I_B	Base Current- Continuous	3	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	$^\circ C$



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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	$I_E = 200\text{mA}$; $I_C = 0$	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 5\text{A}$; $I_B = 1\text{A}$			5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 5\text{A}$; $I_B = 1\text{A}$			1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = 500\text{V}$; $I_E = 0$			10	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = 5\text{V}$; $I_C = 0$	66		200	mA
h_{FE}	DC Current Gain	$I_C = 1\text{A}$; $V_{CE} = 5\text{V}$	8		28	
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	$I_E = 0$; $V_{CB} = 10\text{V}$; $f_{test} = 1.0\text{MHz}$		250		pF

Switching times ,resistive load

t_{stg}	Storage Time	$I_{CP} = 5\text{A}$, $I_{B1} = 1\text{A}$, $I_{B2} = 2\text{A}$, $R_L = 40\ \Omega$			6.0	μs
t_f	Fall Time				0.4	μs