

**SPTECH Silicon PNP Power Transistor**

**2SA1452**

**DESCRIPTION**

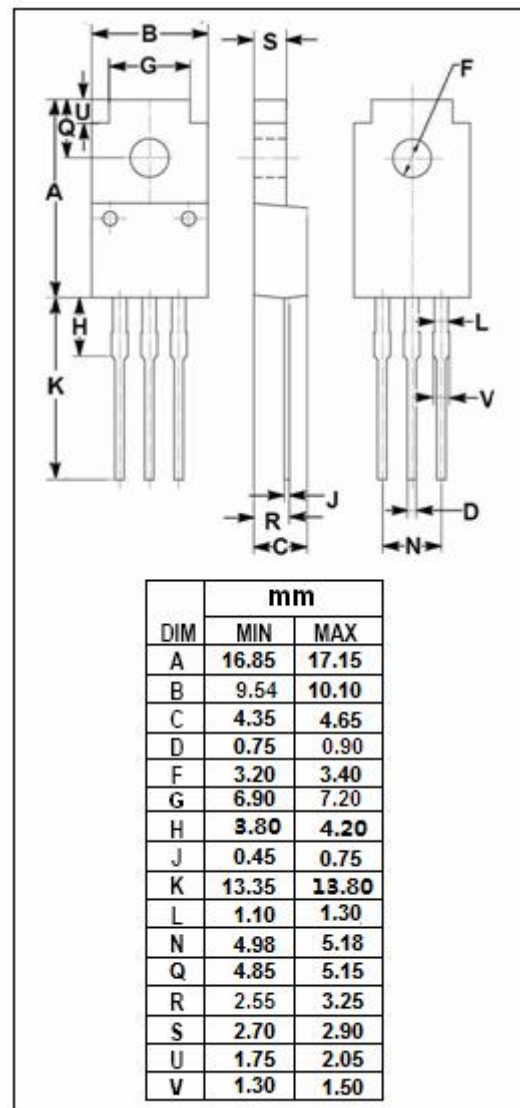
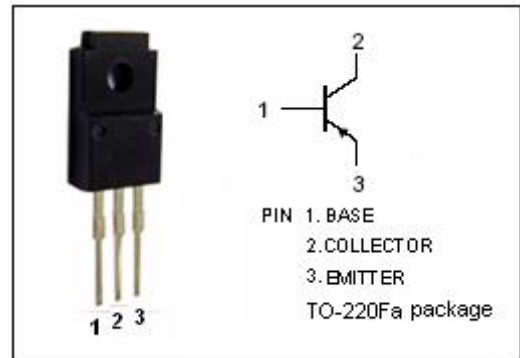
- Low Collector Saturation Voltage-  
:  $V_{CE(sat)} = -0.4V(\text{Max}) @ I_C = -6A$
- Good Linearity of  $h_{FE}$
- High Switching Speed
- Complement to Type 2SC3710

**APPLICATIONS**

- Designed for high current switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-80	V
$V_{CEO}$	Collector-Emmitter Voltage	-80	V
$V_{EBO}$	Emitter-Base Voltage	-6	V
$I_C$	Collector Current-Continuous	-12	A
$I_B$	Base Current-Continuous	-2	A
$P_C$	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	30	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



**ELECTRICAL CHARACTERISTICS**

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = -50mA ; I <sub>B</sub> = 0	-80			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -6A; I <sub>B</sub> = -0.3A			-0.4	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = -6A; I <sub>B</sub> = -0.3A			-1.2	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = -80V ; I <sub>E</sub> = 0			-10	μ A
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = -6V ; I <sub>C</sub> = 0			-10	μ A
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = -1A ; V <sub>CE</sub> = -1V	70		240	
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = -6A ; V <sub>CE</sub> = -1V	40			
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0; V <sub>CB</sub> = -10V; f <sub>test</sub> = 1MHz		400		pF
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = -1A; V <sub>CE</sub> = -5V		50		MHz

Switching Times

t <sub>on</sub>	Turn-on Time	I <sub>C</sub> = -6A, I <sub>B1</sub> = -I <sub>B2</sub> = -0.3A, V <sub>CC</sub> = -30V, R <sub>L</sub> = 5 Ω		0.3		μ s
t <sub>stg</sub>	Storage Time			1.0		μ s
t <sub>f</sub>	Fall Time			0.5		μ s

◆ **h<sub>FE-1</sub> Classifications**

O	Y
70-140	120-240

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