

SPTECH Silicon NPN Power Transistor

2N6544

DESCRIPTION

- Excellent Safe Operating Area
- High Voltage, High Speed
- Low Saturation Voltage

APPLICATIONS

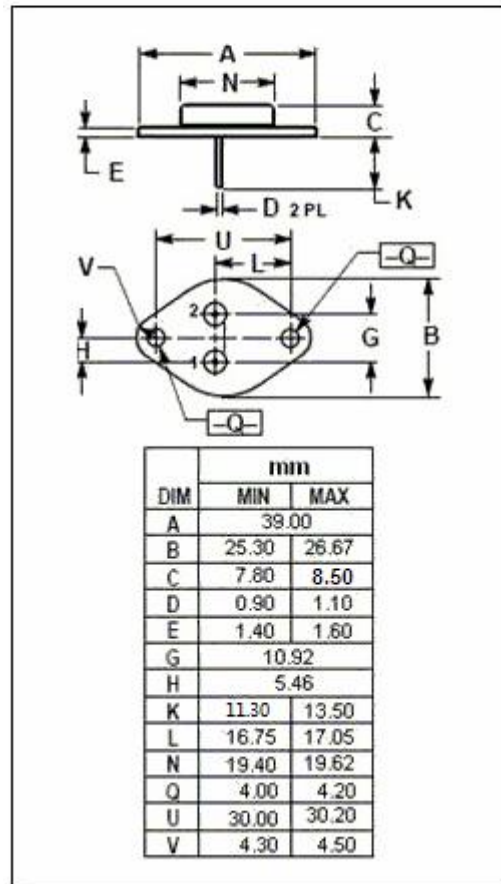
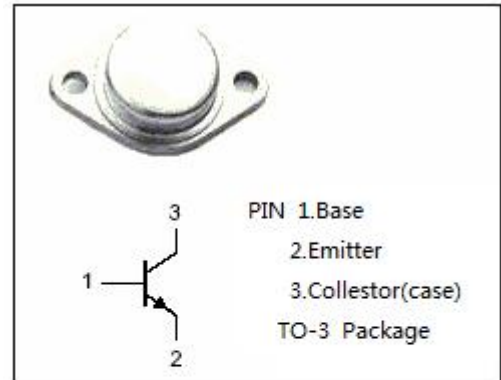
- Designed for high-voltage ,high-speed, power switching in inductive circuits where fall time is critical. They are particularly suited for 115 and 220 volt line operated switch-mode applications such as:
- Switching regulators
- PWM inverters and motor controls
- Solenoid and relay drivers
- Deflection circuits

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CEV}	Collector-Emitter Voltage	650	V
V _{CEO(SUS)}	Collector-Emitter Voltage	300	V
V _{EBO}	Emitter-Base Voltage	9	V
I _C	Collector Current-Continuous	8	A
I _{CM}	Collector Current-Peak	16	A
P _C	Collector Power Dissipation@T _C =25°C	125	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-65~150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	1.4	°C/W



SPTECH Silicon NPN Power Transistor

2N6544

ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CE0(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C= 50\text{mA}; I_B= 0$	300		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C= 5\text{A}; I_B= 1.0\text{A}$		1.5	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C= 8\text{A}; I_B= 2.0\text{A}$		5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C= 5\text{A}; I_B= 1.0\text{A}$		1.6	V
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 9\text{V}; I_C= 0$		1.0	mA
h_{FE-1}	DC Current Gain	$I_C= 2.5\text{A}; V_{CE}= 3\text{V}$	12	60	
h_{FE-2}	DC Current Gain	$I_C= 5\text{A}; V_{CE}= 3\text{V}$	7	35	
f_T	Current Gain-Bandwidth Product	$I_C= 0.3\text{A}; V_{CE}= 10\text{V}; f_{test}=1.0\text{MHz}$	6.0	35	MHz

Switching times-Resistive Load

t_d	Delay Time	$I_C= 5\text{A}, V_{CC}= 250\text{V},$ $I_{B1}= -I_{B2}= 1\text{A}, t_p= 0.1\text{ms}$ Duty Cycle $\leq 2.0\%$		0.05	μs
t_r	Rise Time			1.0	μs
t_s	Storage Time			4.0	μs
t_f	Fall Time			1.0	μs