

SPTECH Silicon NPN Power Transistor

BU209

DESCRIPTION

- High Reverse Voltage
- High Peak Power
- Collector Current- $I_C = 4A$

APPLICATIONS

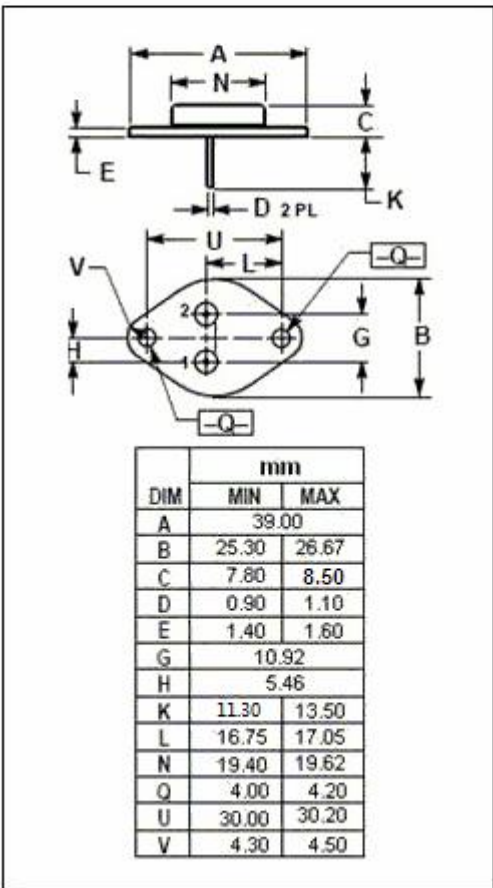
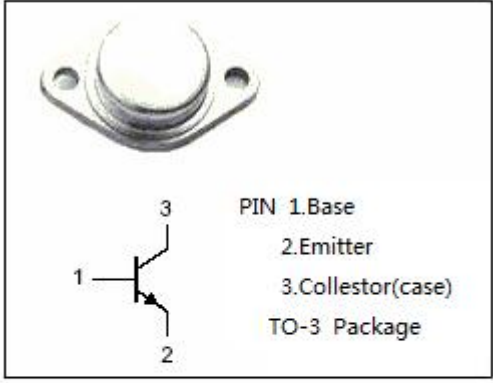
- Designed for use in horizontal deflection circuits in color TV receivers.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CES}	Collector-Emitter Voltage	1300	V
V_{CEO}	Collector-Emitter Voltage	750	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	4	A
I_{CM}	Collector Current-Peak	7.5	A
I_B	Base Current-Continuous	2.5	A
I_{BM}	Base Current-Peak	4	A
P_C	Collector Power Dissipation @ $T_c \leq 95^{\circ}C$	12.5	W
T_J	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature	-65~150	$^{\circ}C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.6	$^{\circ}C/W$



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CES}$	Collector-Emitter Breakdown Voltage	$I_C = 10\text{mA}$	1300			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = 10\text{mA}$; $I_C = 0$	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 3\text{A}$; $I_B = 1.3\text{A}$			5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 3\text{A}$; $I_B = 1.3\text{A}$			1.5	V
h_{FE}	DC Current Gain	$I_C = 3\text{A}$; $V_{CE} = 5\text{V}$	2.25			
C_{OB}	Output Capacitance	$I_E = 0$; $V_{CB} = 10\text{V}$; $f_{test} = 1\text{MHz}$		125		pF
f_T	Current-Gain—Bandwidth Product	$I_C = 0.1\text{A}$; $V_{CE} = 5\text{V}$; $f_{test} = 5\text{MHz}$		7		MHz

Switching Times

t_s	Storage Time	$I_C = 3\text{A}$; $I_B = 1.8\text{A}$; $L_B = 10\text{ }\mu\text{H}$			10	μs
t_f	Fall Time				0.7	μs