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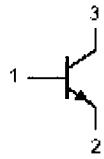
Silicon NPN Power Transistor — BU109

DESCRIPTION

- Excellent Safe Operating Area
- Collector-Emitter Saturation Voltage-
  : $V_{CE(sat)}$= 1.0 V(Max)@ I_C = 5A
- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 150 V(Min)

APPLICATIONS

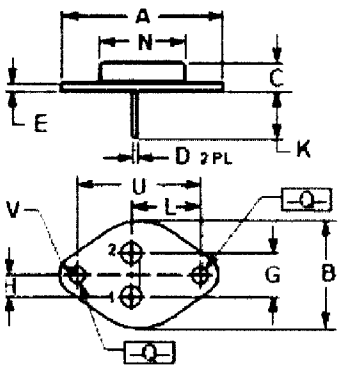
- Designed for horizontal deflection output stage of TVs and CRTs applications



PIN
1. BASE
2. EMITTER
3. COLLECTOR (CASE)
TO-3 package

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	330	V
V_{CEV}	Collector-Emitter Voltage- V_{BE}= -1.5V	330	V
V_{CEO}	Collector-Emitter Voltage	150	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	7	A
I_{CM}	Collector Current-Peak(Repetitive)	10	A
I_{CM}	Collector Current-Peak(t= 10ms)	15	A
I_B	Base Current	4	A
P_C	Collector Power Dissipation@T_C=25℃	60	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-65~150	℃



DIM	MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.30
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.40	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	2.08	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	70	℃/W

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 100mA ; I_B= 0	150		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 5A; I_B= 0.5A		1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 5A; I_B= 0.5A		1.2	V
I_{CES}	Collector Cutoff Current	V_{CE}= 330V; V_{BE}= 0 V_{CE}= 200V; V_{BE}= 0 V_{CE}= 200V; V_{BE}= 0,T_C=150℃		5.0 0.1 1.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 6V; I_C= 0		1.0	mA
f_T	Current Gain-Bandwidth Product	I_C= 0.5A ; V_{CE}= 10V	10		MHz
t_{off}	Turn-Off Time	I_C= 5A; I_B= 0.5A		0.75	μs