

isc Silicon NPN Power Transistor

S2818A

DESCRIPTION

- High Voltage
- High Switching Speed
- Low Saturation Voltage
- Built-in Damper Diode

APPLICATIONS

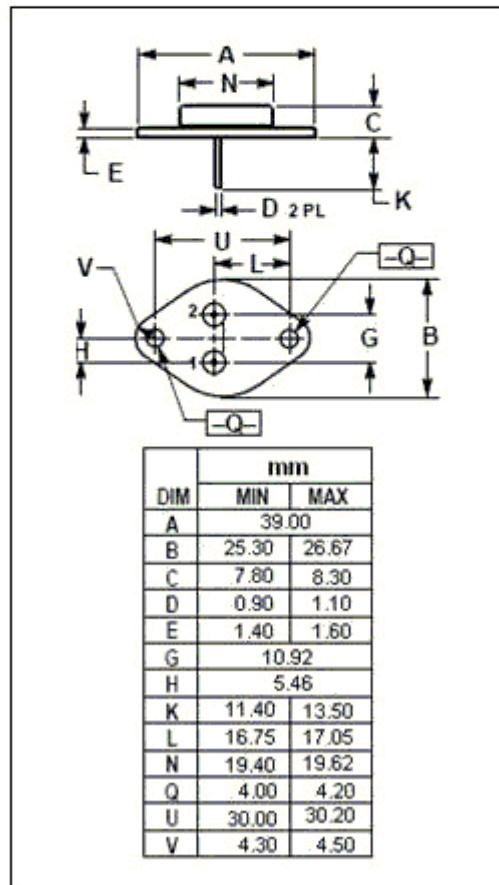
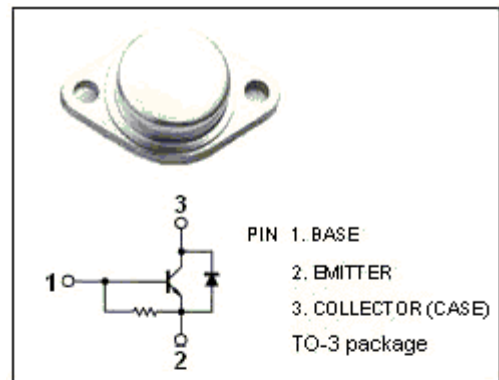
- Color TV horizontal output applications

ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CES}	Collector-Emitter Voltage	1500	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current-Continuous	5	A
I _{CM}	Collector Current-peak	7.5	A
I _{BM}	Base Current-peak	4	A
P _C	Collector Power Dissipation @ T _C ≤ 95°C	12.5	W
T _j	Junction Temperature	115	°C
T _{stg}	Storage Temperature Range	-65~115	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	1.6	°C/W



isc Silicon NPN Power Transistor

S2818A

ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=100\text{mA}$; $I_B=0$; $L=25\text{mH}$	700			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=200\text{mA}$; $I_C=0$	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=4.5\text{A}$; $I_B=2\text{A}$			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=4.5\text{A}$; $I_B=2\text{A}$			1.5	V
I_{CES}	Collector Cutoff Current	$V_{CE}=1500\text{V}$; $V_{BE}=0$			1.0	mA
h_{FE}	DC Current Gain	$I_C=4.5\text{A}$; $V_{CE}=5\text{V}$	2.25			
C_{OB}	Output Capacitance	$I_E=0$; $V_{CB}=10\text{V}$; $f=1\text{MHz}$		125		pF
f_T	Current-Gain—Bandwidth Product	$I_C=0.1\text{A}$; $V_{CE}=5\text{V}$		7		MHz
V_{ECF}	C-E Diode Forward Voltage	$I_F=5\text{A}$			2.0	V

Switching Times

t_s	Storage Time	$I_C=4.5\text{A}$; $I_{B(end)}=1.8\text{A}$		10		μs
t_f	Fall Time			0.7		μs