MOSPEC

Silicon NPN Darlington Power Transistor

NPN

2SD798

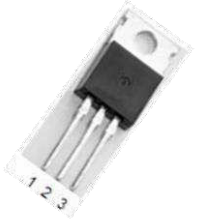
DESCRIPTION :

- High DC Current Gain –
  hFE = 1500(Min) @ I_C= 2A, V_{CE}= 2V
- Collector–Emitter Sustaining Voltag-
  $V_{CEO(SUS)}$ = 300V(Min)
- Collector–Emitter Saturation Voltage
  $V_{CE(SAT)}$ = 2.0V(Max) @ I_C= 4A
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS :

- Designed for use in high-voltage switching igniter applications.

6 AMPERES
POWER DARLINGTON
TRANSISTOR
300 VOLTS
30 WATTS



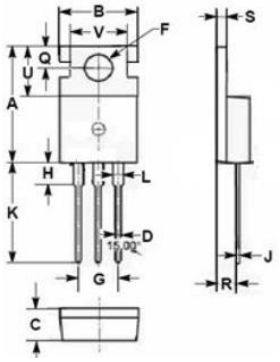
TO-220

MAXIMUM RATINGS

Characteristic	Symbol	2SD798	Unit
Collector-Base Voltage	V_{CBO}	600	V
Collector-Emitter Voltage	V_{CEO}	300	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current-Continuous	I_C	6	A
Base Current- Continuous	I_B	1	A
Collector Power Dissipation @T_C=25℃	P_C	30	Watts
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55 to +150	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{th\ j\text{-}c}$	4.16	°C/W



PIN 1.BASE.
2.COLLECTOR
3.EMITTER

DIM	MILLIMETERS	
	MIN	MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

ELECTRICAL CHARATERISTICS (T_C=25^{O}C unless otherwise noted)

Characteristic	Symbol	Min.	Max	Unit
OFFCHARACTERISTICS				
Collector-Emitter Sustaining Voltage (I_C = 30 mA, I_B = 0)	$V_{CEO(SUS)}$	300		V
Collector Cutoff Current (V_{CB} = 600 V, I_E = 0)	I_{CBO}		0.5	mA
Emitter Cutoff Current (V_{EB}= 5.0 V, I_C = 0)	I_{EBO}		2.0	mA
ON CHARACTERISTICS				
DC Current Gain (I_C = 2.0 A, V_{CE} = 2.0 V) (I_C = 4.0 A, V_{CE} = 2.0 V)	h_{FE}	1500 200		
Collector-Emitter Saturation Voltage (I_C = 4.0 A, I_B = 40 mA)	$V_{CE(SAT)}$		2.0	V
Base-Emitter Saturation Voltage (I_C = 4.0 A, I_B = 40 mA)	$V_{BE(SAT)}$		2.5	V
DYNAMIC CHARATERISTICS				
Output Capacitance I_E= 0 ; V_{CB}= 50V;ftest= 1.0MHz	C_{OB}	35 (Typ)		MHz

SWITCHING CHARATERISTICS

Turn-on Time	V_{CC}=100V, Ic=4A	t_{ON}	1.0 (Typ)	us
Storage Time	I_{B1}=-I_{B2}=40mA, R_L=25Ω	t_{STG}	8.0 (Typ)	us
Fall Time		t_f	5.0 (Typ)	us

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