

isc Silicon PNP Darlington Power Transistor

MJD128

DESCRIPTION

- High DC Current Gain-
: $h_{FE} = 1000(\text{Min}) @ I_C = -4\text{A}$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(\text{SUS})} = -120\text{V}(\text{Min})$
- DPAK for Surface Mount Applications
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

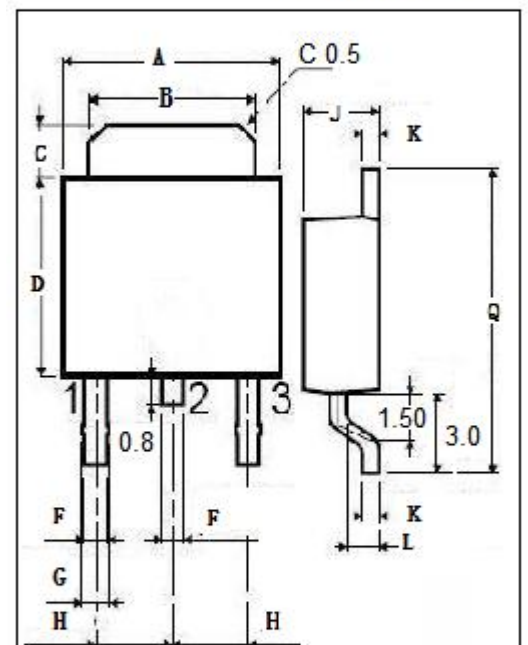
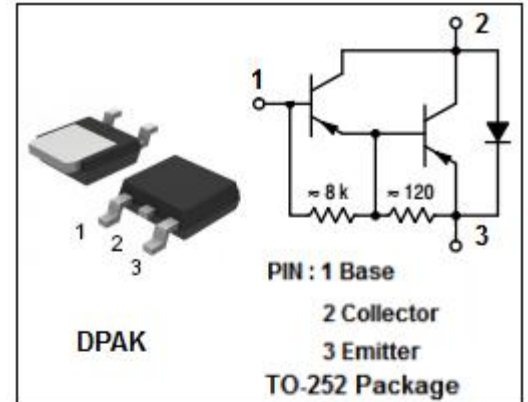
- Designed for general purpose amplifier and low speed switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-120	V
V_{CEO}	Collector-Emitter Voltage	-120	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-8	A
I_{CM}	Collector Current-Peak	-16	A
I_B	Base Current-DC	-120	mA
P_C	Collector Power Dissipation $T_C = 25^\circ\text{C}$	20	W
	Collector Power Dissipation $T_a = 25^\circ\text{C}$	1.75	
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	6.25	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	71.4	$^\circ\text{C/W}$



DIM	mm	
	MIN	MAX
A	6.40	6.60
B	5.20	5.40
C	1.15	1.35
D	5.70	6.10
F	0.65	
G	0.75	
H	2.10	2.50
J	2.10	2.40
K	0.40	0.60
L	0.90	1.10
Q	9.90	10.1

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ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = -30mA, I _B = 0	-120			V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = -4A, I _B = -16mA			-2.0	V
V _{CE(sat)-2}	Collector-Emitter Saturation voltage	I _C = -8A, I _B = -80mA			-4.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C =-8A; I _B = -80mA			-4.5	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = -4A ; V _{CE} = -4V			-2.8	V
I _{CBO}	Collector Cutoff Current	V _{CB} = -120V, I _E = 0			-10	uA
I _{CEO}	Collector Cutoff Current	V _{CE} = -120V, I _B = 0			-5	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = -5V; I _C = 0			-2	mA
h _{FE-1}	DC Current Gain	I _C = -4A ; V _{CE} = -4V	1000		12000	
h _{FE-2}	DC Current Gain	I _C = -8A ; V _{CE} = -4V	100			
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = -10V, f= 0.1MHz		300		pF

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