

isc Silicon NPN Darlington Power Transistor

ISCD18147

DESCRIPTION

- Low Collector Saturation Voltage
- High DC Current Gain
- High Reliability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

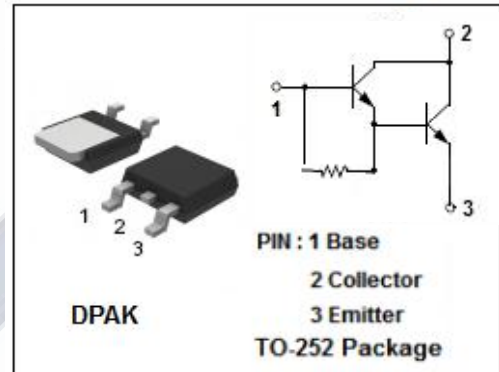
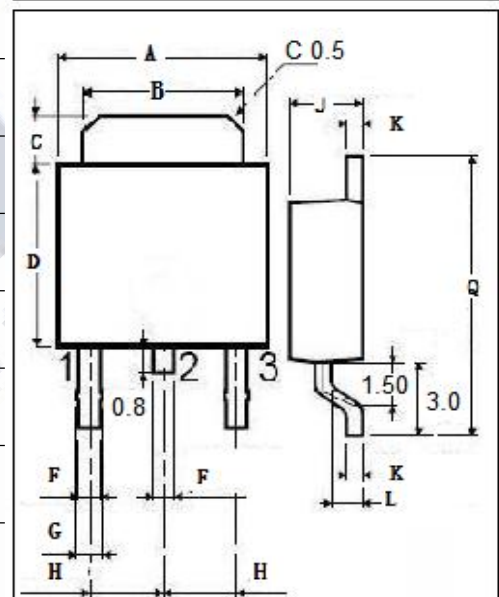
- Audio power amplifiers
- Relay & solenoid drivers
- Motor controls
- General purpose power amplifiers

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	300	V
V_{CEO}	Collector-Emitter Voltage	200	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	10	A
I_{CM}	Collector Current-Pulse	12	A
P_C	Collector Power Dissipation @ $T_C=25^{\circ}\text{C}$	30	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R_{thj-c}	Thermal Resistance, Junction to Case	4.17	$^{\circ}\text{C/W}$



DIM	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

isc Silicon NPN Darlington Power Transistor**ISCD18147****ELECTRICAL CHARACTERISTICS****T_c=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CBO}	Collector- Base Breakdown Voltage	I _C = 0.1mA ; I _E = 0	300			V
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 5mA ; I _B = 0	200			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 0.1mA; I _C = 0	5			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 4A; I _B = 40mA			2	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 300V; I _E = 0			5	μA
I _{EBO}	Emitter Cutoff Current	V _{EB} =5V; I _C =0			5	μA
h _{FE}	DC Current Gain	I _C = 2A; V _{CE} = 5V	5000			