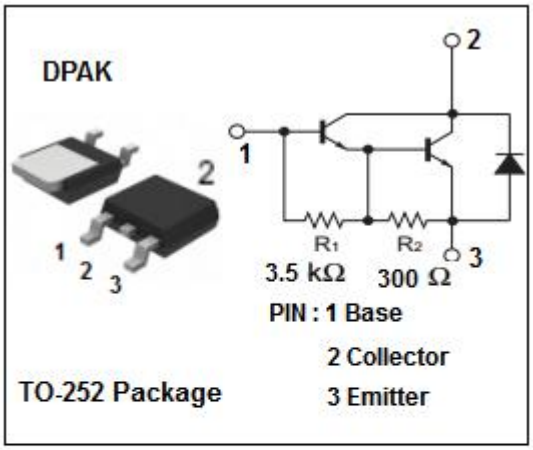
isc Silicon NPN Power Transistor — 2SD1980



DESCRIPTION

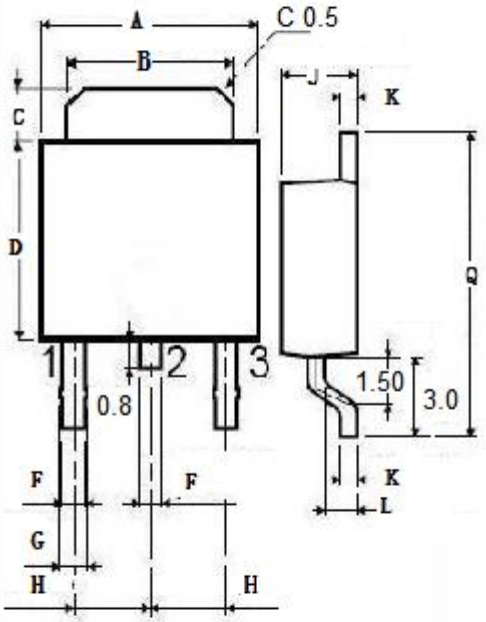
- Darlington connection for high DC current gain
- Built in resistor between base and emitter
- Built in damper diode
- Complementary PNP types:2SB1316
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Motor drivers,LED driver,Power supply

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	2.0	A
I_{CM}	Collector Current-Peak	3.0	A
P_C	Collector Power Dissipation @ T_C=25℃	10	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



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℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
BV_{CBO}	Collector-Base breakdown voltage	I_C=50uA	100			V
BV_{CEO}	Collector-Emitter breakdown voltage	I_C=5mA	100			V
BV_{EBO}	Emitter-Base breakdown voltage	I_E=5mA	6			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 1A; I_B= 1mA			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 100V; I_E= 0			10	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			3.0	mA
h_{FE}	DC Current Gain	I_C= 1A; V_{CE}= 2V	1000		10000	
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f= 1.0MHz		25		pF
f_T	Current-Gain—Bandwidth Product	I_C= 0.1A; V_{CE}= 5V,f= 100MHz		80		MHz