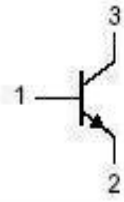
isc Silicon NPN Power Transistor 3DF1C



PIN 1. BASE
2. EMITTER
3. COLLECTOR (CASE)
TO-66 package

DESCRIPTION

- With TO-66 packaging
- Large collector current
- Low collector saturation voltage
- High power dissipation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

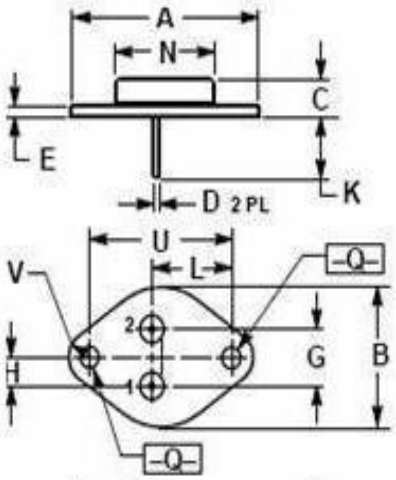
- Designed for use in DC-DC converter
- Driver of solenoid or motor

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	200	V
V_{CEO}	Collector-Emitter Voltage	150	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	1.5	A
P_D	Total Power Dissipation@T_C=75℃	10	W
T_J	Max.Junction Temperature	175	℃
T_{stg}	Storage Temperature	-55~175	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	10	℃/W



DIM	mm MIN	MAX
A	31.40	31.80
B	17.30	17.70
C	6.70	7.10
D	0.70	0.90
E	1.40	1.60
G	5.08	
H	2.54	
K	9.80	10.20
L	14.70	14.90
N	12.40	12.60
Q	3.60	3.80
U	24.30	24.50
V	3.50	3.70

isc Silicon NPN Power Transistor 3DF1C

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
BV_{CBO}	Collector-Base Sustaining Voltage	I_C= 1mA; I_E= 0	200		V
BV_{CEO}	Collector-Emitter Sustaining Voltage	I_C= 1mA; I_B= 0	150		V
BV_{EBO}	Emitter-Base Sustaining Voltage	I_E= 0.5mA; I_C= 0	6		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 0.75A; I_B= 0.075A		0.8	V
I_{CEO}	Collector Cutoff Current	V_{CE}= 100V; I_B= 0		0.2	mA
h_{FE}	DC Current Gain	I_C= 0.75A; V_{CE}= 10V	15		