MOSPEC

DARLINGTON COMPLEMENTARY SILICON POWER TRANSISTOR

PNP

2N6052

12 AMPERES
COMPLEMENTARY
SILICON
POWER TRANSISTOR
100 VOLTS
150 WATTS

DESCRIPTION：

- High DC Current Gain-hFE=750(Min)@I_C = -6A
- Collector-Emitter Sustaining Voltage - : $V_{CEO(SUS)}$= -100V(Min)
- Complement to Type 2N6059
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS：

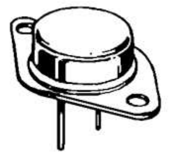
- Designed for general purpose amplifier and low frequency switching applications

MAXIMUM RATINGS

Characteristic	Symbol	2N6052	Unit
Collector-Emitter Voltage	V_{CEO}	-100	V
Collector-Base Voltage	V_{CBO}	-100	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current-Continuous	I_C	-12	A
Collector Current-Peak	I_{CM}	-20	A
Base Current	I_B	-0.2	A
Collector Power Dissipation @TC=25℃	P_C	150	Watts
Junction Temperature	T_J	200	°C
Storage Temperature	T_{STG}	-65 to +200	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{th\ j\text{-}c}$	1.17	°C/W



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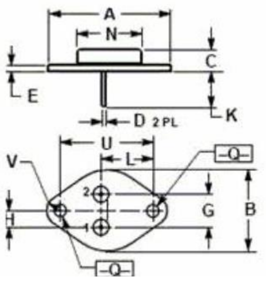

PIN 1.BASE.
2.EMITTER
COLLECTOR(CASE)

DIM	MILLIMETERS	
	MIN	MAX
A	39.00	
B	25.3	26.67
C	7.80	8.50
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.30	13.50
L	16.75	17.05
N	19.40	19.62
O	4.00	4.20
U	30.00	30.20
V	4.30	4.50

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

Characteristic	Symbol	Min.	Max	Unit

OFFCHARACTERISTICS

Collector-Emitter Sustaining Voltage (I_C = -100 mA, I_B = 0)	$V_{CEO(SUS)}$	-100		V
Collector Cutoff Current (V_{CE} = -50 V, I_B = 0)	I_{CEO}		-1.0	mA
Collector Cutoff Current (V_{CE} = -100 V, $V_{BE(OFF)}$ = -1.5V) (V_{CE} = -100 V, $V_{BE(OFF)}$ = -1.5V, T_C=150℃)	I_{CEX}		-0.5 -5.0	mA
Emitter Cutoff Current (V_{EB}= -5.0 V, I_C = 0)	I_{EBO}		-2.0	mA

ON CHARACTERISTICS

DC Current Gain (I_C = -6 A, V_{CE} = -3 V) (I_C = -12 A, V_{CE} = -3 V)	h_{FE}	750 100	18000	
Collector-Emitter Saturation Voltage (I_C = -6 A, I_B = -24 mA) (I_C = -12 A, I_B = -120 mA)	$V_{CE(SAT)}$		-2.0 -3.0	V
Base-Emitter Saturation Voltage (I_C = -12 A, I_B = -120 mA)	$V_{BE(SAT)}$		-4.0	V
Base-Emitter On Voltage (I_C = -6 A, V_{CE} = -3 V)	$V_{BE(ON)}$		-2.8	V

DYNAMIC CHARATERISTICS

Transition frequency (V_{CE}= -3 V , I_C = -5 A , f = 1.0 MHz)	f_T	4		MHz

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