

2N6045

GENERAL DESCRIPTION

- Silicon NPN medium power Darlington transistors in a plastic envelope, primarily for use in low-speed switching and general purpose.
- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

NPN

**Silicon Power
Darlington Transistor**

QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITION	MIN	MAX	UNIT
V _{CESM}	Collector-emitter voltage peak value	V _{BE} =0V	100		V
V _{CEO}	Collector-emitter voltage (open base)		100		V
I _C	Collector current (DC)		8.0		A
I _{CM}	Collector current peak value		16		A
P _{TOT}	Total power dissipation	T _{mb} ≤25°C	75		W
V _{CESat}	Collector -emitter saturation voltage	I _C =8A; I _B =0.08A		4.0	V
I _{CSat}	Collector saturation current				A
V _{BE}	Emitter forward voltage	I _E =8A			V
t _f	Fall time	I _C =3.0A; I _{B1} =-I _{B2} =0.3A; V _{CC} =30V			us

LIMITING VALUES

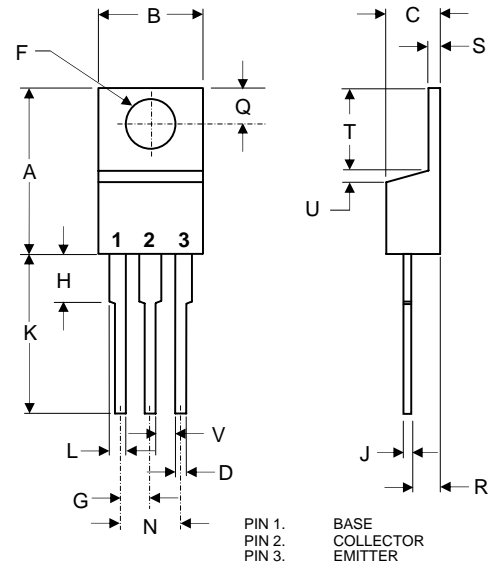
SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{CESM}	Collector-emitter voltage peak value	V _{BE} =0V		100	V
V _{CEO}	Collector-emitter voltage (open base)			100	V
V _{EBO}	Emitter-base voltage (open collector)			5	V
I _C	Collector current (DC)			8	A
I _B	Base current(DC)			0.12	A
I _{BM}	Base current peak value				A
P _{TOT}	Total power dissipation	T _{mb} ≤25°C		75	W
T _{stg}	Storage temperature		-60	150	°C
T _j	Junction temperature		-60	150	°C

ELECTRICAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITION	MIN	MAX	UNIT
I _{CB0}	Collector-base cut-off current	V _{CB} =100V		20	uA
I _{EBO}	Emitter-base cut-off current	V _{EB} =5V		2.0	mA
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =100mA	100		V
V _{CEsat1}	Collector-emitter saturation voltage	I _C =3.0A, I _B =12mA		2.0	V
V _{CEsat2}	Collector-emitter saturation voltage	I _C =8A, I _B =80mA		4.0	V
h _{FE1}	DC current gain	I _C =3A, V _{CE} =4V	1000	20000	
h _{FE2}	DC current gain	I _C =8A, V _{CE} =4V	100		
f _T	Transition frequency at f=1MHz	I _C =0.5A, V _{CE} =4V			MHz
C _C	Collector capacitance at f=1MHz	V _{CB} =10V			pF
t _{ON}	On times	I _C =3A, I _B =0.3A, V _{CC} =30V			us
t _S	Turn-off storage time	I _C =3A, I _B =0.3A, V _{CC} =30V			us
t _F	Fall time	I _C =3A, I _B =0.3A, V _{CC} =30V			us

Notes: 1. High Temperature Solder Exemption Applied, see EU Directive Annex Notes 7.

TO-220



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.560	.625	14.22	15.88	
B	.380	.420	9.65	10.67	
C	.140	.190	3.56	4.82	
D	.020	.045	0.51	1.14	
F	.139	.161	3.53	4.09	∅
G	.190	.110	2.29	2.79	
H	---	.250	---	6.35	
J	.012	.025	0.30	0.64	
K	.500	.580	12.70	14.73	
L	.045	.060	1.14	1.52	
N	.190	.210	4.83	5.33	
Q	.100	.135	2.54	3.43	
R	.080	.115	2.04	2.92	
S	.045	.055	1.14	1.39	
T	.230	.270	5.84	6.86	
U	----	.050	----	1.27	
V	.045	----	1.15	----	



Micro Commercial Components

Ordering Information :

Device	Packing
Part Number-BP	Bulk; 1Kpcs/Box

*****IMPORTANT NOTICE*****

Micro Commercial Components Corp. reserves the right to make changes without further notice to any product herein to make corrections, modifications, enhancements, improvements, or other changes. **Micro Commercial Components Corp.** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp.** and all the companies whose products are represented on our website, harmless against all damages.

*****LIFE SUPPORT*****

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

*****CUSTOMER AWARENESS*****

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.