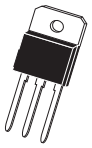
TIP140 TIP141 TIP142 NPN
TIP145 TIP146 TIP147 PNP

SILICON POWER DARLINGTON COMPLEMENTARY TRANSISTORS



TO-218 TRANSISTOR CASE

Central™ Semiconductor Corp.

DESCRIPTION:
The CENTRAL SEMICONDUCTOR TIP140, TIP145 series types are Complementary Silicon Power Darlington Transistors manufactured by the epitaxial base process, designed for general purpose amplifier and low speed switching applications where high gain is required.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: (T_C=25°C)

	SYMBOL	TIP140 TIP145	TIP141 TIP146	TIP142 TIP147	UNITS
Collector-Base Voltage	V_{CBO}	60	80	100	V
Collector-Emitter Voltage	V_{CEO}	60	80	100	V
Emitter-Base Voltage	V_{EBO}		5.0		V
Continuous Collector Current	I_C		10		A
Peak Collector Current	I_{CM}		20		A
Base Current	I_B		0.5		A
Power Dissipation	P_D		125		W
Operating and Storage Junction Temperature	T_J, T_{stg}		-65 to +150		°C
Thermal Resistance	Θ_{JC}		1.0		°C/W

ELECTRICAL CHARACTERISTICS: (T_C=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{CBO}	V_{CB}=Rated V_{CBO}			1.0	mA
I_{CEO}	V_{CE}=½ Rated V_{CEO}			2.0	mA
I_{EBO}	V_{EB}=5.0V			2.0	mA
BV_{CEO}	I_C=30mA (TIP140, TIP145)	60			V
BV_{CEO}	I_C=30mA (TIP141, TIP146)	80			V
BV_{CEO}	I_C=30mA (TIP142, TIP147)	100			V
$V_{CE(SAT)}$	I_C=5.0A, I_B=10mA			2.0	V
$V_{CE(SAT)}$	I_C=10A, I_B=40mA			3.0	V
$V_{BE(ON)}$	V_{CE}=4.0V, I_C=10A			3.0	V
V_F	I_F=10A			2.8	V
h_{FE}	V_{CE}=4.0V, I_C=5.0A	1000			
h_{FE}	V_{CE}=4.0V, I_C=10A	500			
t_{on}	I_C=10A, I_{B1}=I_{B2}=40mA, R_L=3.0Ω		0.9		μs
t_{off}	I_C=10A, I_{B1}=I_{B2}=40mA, R_L=3.0Ω		4.0		μs

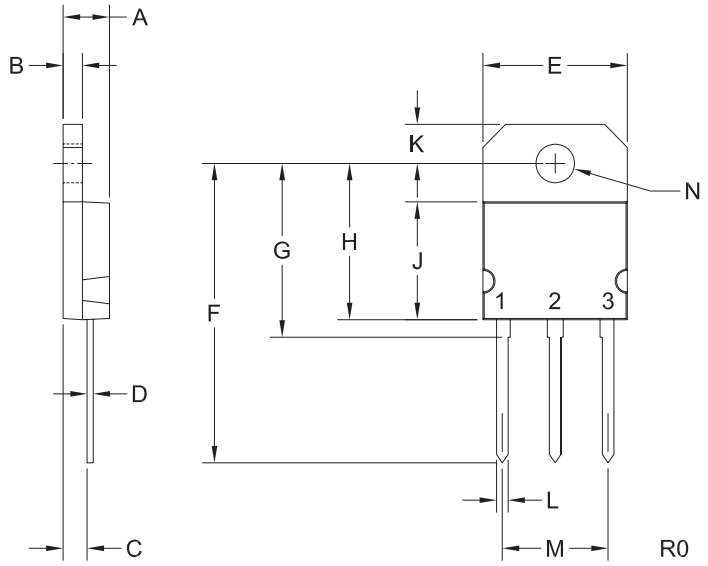
R2 (1-August 2008)

Central™
Semiconductor Corp.

TIP140 TIP141 TIP142 NPN
TIP145 TIP146 TIP147 PNP

SILICON POWER DARLINGTON
COMPLEMENTARY TRANSISTORS

TO-218 TRANSISTOR CASE - MECHANICAL OUTLINE



DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.185	0.193	4.70	4.90
B	0.075	0.082	1.91	2.08
C	0.098		2.49	
D	0.019	0.030	0.48	0.76
E	0.578	0.598	14.68	15.19
F	1.220		30.99	
G	0.708		17.98	
H	-	0.637	-	16.18
J	-	0.480	-	12.19
K	0.155	0.163	3.94	4.14
L	0.043	0.051	1.09	1.30
M	0.425	0.437	10.80	11.10
N	0.157	0.161	3.99	4.09

TO-218 Transistor (REV: R0)

LEAD CODE:
1) BASE
2) COLLECTOR
3) EMITTER
Note: Tab is common to lead 2.

MARKING:
FULL PART NUMBER

R2 (1-August 2008)