

"BIG IDEAS IN
BIG POWER"
PowerTech

250 AMPERES

MT - 5000

MT - 5001

POWERBLOCK POWER SYSTEM

MAXIMUM RATINGS

	SYMBOL	MT-5000	MT-5001
Collector-Base Voltage	V_{CBO}	60V	80V
Collector-Emitter Voltage	$V_{CE(sus)}$	60V	80V
Emitter-Base Voltage	V_{EBO}	10V	10V
Peak Collector Current*	I_C	250A	250A
D.C. Collector Current	I_C	125A	125A
Power Dissipation @ 25°C	P_D	350W	350W
Power Dissipation @ 100°C	P_D	200W	200W
Thermal Resistance	θ_{J-C}	0.5° C/W	0.5° C/W
Operating Junction Temp. Range		-65 to 200° C	-65 to 200° C
Storage Temperature Range		-65 to 150° C	-65 to 150° C
Package		PPS-250	PPS-250

ELECTRICAL CHARACTERISTICS 25°C

TEST	SYMBOL	LIMITS				UNIT	TEST CONDITIONS
		MT-5000		MT-5001			
		MIN.	MAX.	MIN.	MAX.		
D.C. Current Gain*	h_{FE}	500	—	500	—	—	$I_C=125A, V_{CE}=4V$
D.C. Current Gain*	h_{FE}	175	—	175	—	—	$I_C=250A, V_{CE}=4V$
Collector Saturation Voltage*	$V_{CE(sat)}$	—	1.5	—	1.5	V	$I_C=125A, I_B=0.5A$
Collector Saturation Voltage*	$V_{CE(sat)}$	—	2.5	—	2.5	V	$I_C=250A, I_B=2.0A$
Base Emitter Voltage*	V_{BE}	—	2.5	—	2.5	V	$I_C=125A, V_{CE}=4V$
Base Emitter Voltage*	V_{BE}	—	3.0	—	3.0	V	$I_C=250A, V_{CE}=4V$
Collector-Emitter Voltage* \emptyset	$V_{CE(sus)}$	60	—	80	—	V	$I_C=200mA,$
Collector Cutoff Current*	I_{CES}	—	5	—	—	mA	$V_{CB}=60V, R_{BE}=0$
Collector Cutoff Current**	I_{CES}	—	—	—	5	mA	$V_{CB}=80V, R_{BE}=0$
Emitter Cutoff Current***	I_{EBO}	—	2	—	2	mA	$V_{EB}=10V, I_{CB}=0$

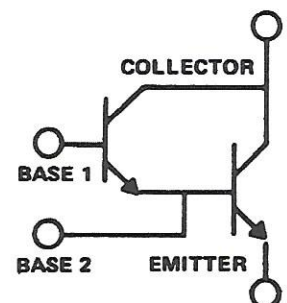
* $\leq 300\mu\text{sec. DC} \leq 2\%$

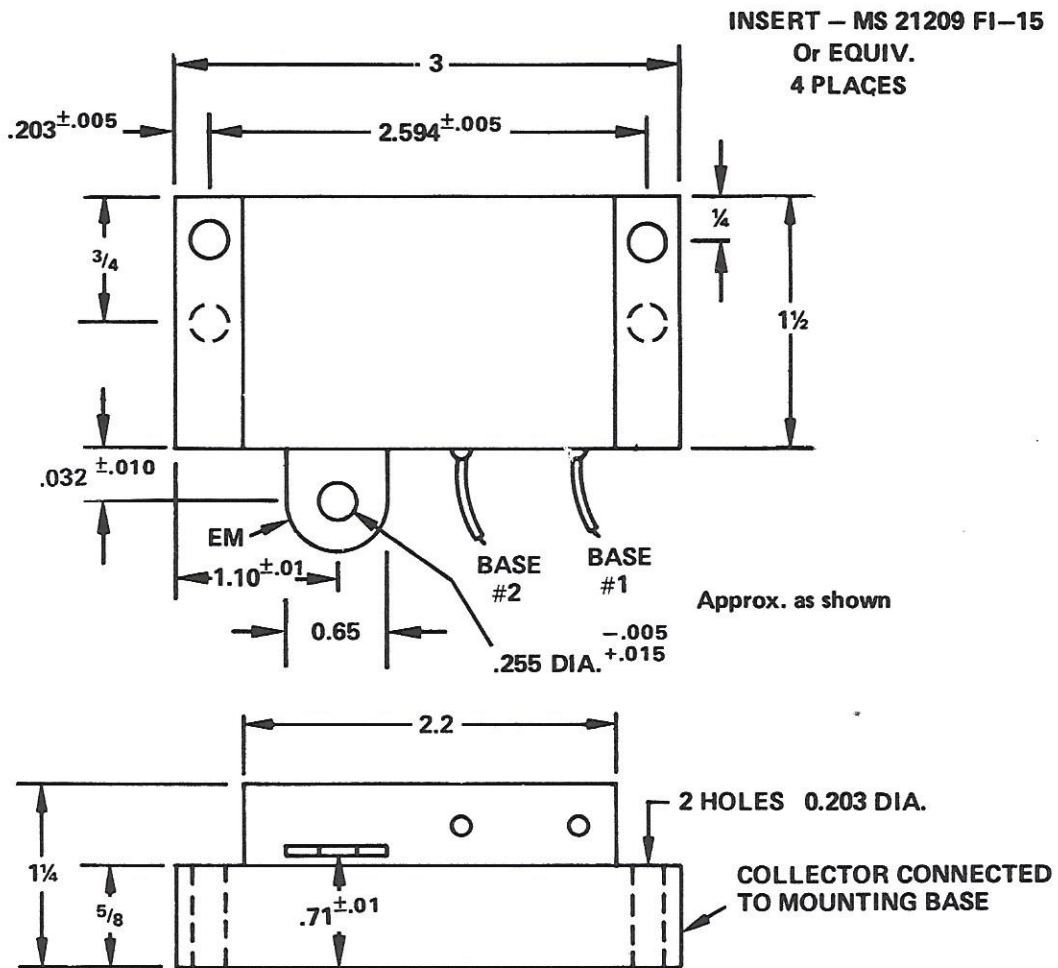
** Base #1 connected to Base #2

*** Base #2 open circuit

$\emptyset R_{B_1B_2} = 100 \text{ ohms}, R_{B_2E} = 10 \text{ ohms}$

INTERNAL
CONNECTION:
DARLINGTON





PPS - 250