

"BIG IDEAS IN"
BIG POWER"
PowerTech

800 AMPERES

MT -5004

MT -5005

POWERBLOCK POWER SYSTEM

MAXIMUM RATINGS

	SYMBOL	MT-5004	MT-5005
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	800A	800A
D.C. Collector Current	I_C	500A	500A
Power Dissipation @ 25°C	P_D	1400W	1400W
Power Dissipation @ 100°C	P_D	800W	800W
Thermal Resistance	θ_{J-C}	0.12° C/W	0.12° 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-1200	PPS-1200

ELECTRICAL CHARACTERISTICS 25°C

TEST	SYMBOL	LIMITS				UNIT	TEST CONDITIONS
		MT-5004		MT-5005			
		MIN.	MAX.	MIN.	MAX.		
D.C. Current Gain*	h_{FE}	400	—	400	—	—	$I_C=500A, V_{CE}=4V$
D.C. Current Gain*	h_{FE}	100	—	100	—	—	$I_C=800A, V_{CE}=4V$
Collector Saturation Voltage*	$V_{CE(sat)}$	—	2.0	—	2.0	V	$I_C=500A, I_B=1.5A$
Collector Saturation Voltage*	$V_{CE(sat)}$	—	2.5	—	2.5	V	$I_C=800A, I_B=8.0A$
Base Emitter Voltage*	V_{BE}	—	2.5	—	2.5	V	$I_C=500A, V_{CE}=4V$
Base Emitter Voltage*	V_{BE}	—	3.0	—	3.0	V	$I_C=800A, V_{CE}=4V$
Collector-Emitter Voltage* \emptyset	$V_{CE(sus)}$	60	—	80	—	V	$I_C=200mA,$
Collector Cutoff Current*	I_{CES}	—	15	—	—	mA	$V_{CB}=60V, R_{BE}=0$
Collector Cutoff Current**	I_{CES}	—	—	—	15	mA	$V_{CB}=80V, R_{BE}=0$
Emitter Cutoff Current***	I_{EBO}	—	5	—	5	mA	$V_{EB}=10V, I_{CB}=0$

* $< 300\mu$ sec. DC $< 2\%$

** Base #1 connected to Base #2

*** Base #2 open circuit

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

INTERNAL CONNECTION:
DARLINGTON

