"BIG IDEAS IN BIG POWER"

PowerTech

500 AMPERES

MT - 5002
MT - 5003

POWERBLOCK POWER SYSTEM

MAXIMUM RATINGS	SYMBOL	MT-5002	MT-5003
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	500A	500A
D.C. Collector Current	I_C	250A	250A
Power Dissipation @ 25°C	P_D	700W	700W
Power Dissipation @ 100°C	P_D	400W	400W
Thermal Resistance	θ_{J-C}	.25° C/W	.25° 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- 500	PPS- 500

ELECTRICAL CHARACTERISTICS 25°C

TEST	SYMBOL	LIMITS				UNIT	TEST CONDITIONS
		MT-5002		MT-5003			
		MIN.	MAX.	MIN.	MAX.		
D.C. Current Gain*	h_{FE}	500	–	500	–	–	I_C=250A, V_{CE}=4V
D.C. Current Gain*	h_{FE}	100	–	100	–	–	I_C=500A, V_{CE}=4V
Collector Saturation Voltage*	$V_{CE(sat)}$	–	2.0	–	2.0	V	I_C=250A, I_B=0.5A
Collector Saturation Voltage*	$V_{CE(sat)}$	–	2.5	–	2.5	V	I_C=500A, I_B=5.0A
Base Emitter Voltage*	V_{BE}	–	2.5	–	2.5	V	I_C=250A, V_{CE}=4V
Base Emitter Voltage*	V_{BE}	–	3.0	–	3.0	V	I_C=500A, V_{CE}=4V
Collector-Emitter Voltage* ø	$V_{CE(sus)}$	60	–	80	–	V	I_C=200mA,
Collector Cutoff Current*	I_{CES}	–	10	–	–	mA	V_{CB}=60V, R_{BE}=0
Collector Cutoff Current**	I_{CES}	–	–	–	10	mA	V_{CB}=80V, R_{BE}=0
Emitter Cutoff Current ***	I_{EBO}	–	5	–	5	mA	V_{EB}=10V, I_{CB} =0

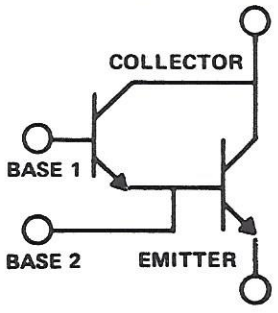
* < 300μ sec. DC < 2%

** Base #1 connected to Base #2

*** Base #2 open circuit

ø $R_{B_1B_2}$ = 100 ohms, R_{B_2E} = 10 ohms

INTERNAL CONNECTION: DARLINGTON



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