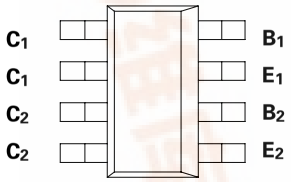
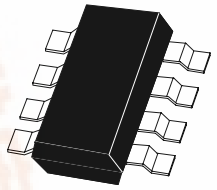
SM-8 DUAL NPN MEDIUM POWER DARLINGTON TRANSISTORS

ISSUE 1 - NOVEMBER 1995

ZDT605



PARTMARKING DETAIL – T605



SM-8
(8 LEAD SOT223)

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	140	V
Collector-Emitter Voltage	V_{CEO}	120	V
Emitter-Base Voltage	V_{EBO}	10	V
Peak Pulse Current	I_{CM}	4	A
Continuous Collector Current	I_C	1	A
Operating and Storage Temperature Range	T_j:T_{stg}	-55 to +150	°C

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	VALUE	UNIT
Total Power Dissipation at T_{amb} = 25°C* Any single die "on" Both die "on" equally	P_{tot}	 2.25 2.75	 W W
Derate above 25°C* Any single die "on" Both die "on" equally		 18 22	 mW/ °C mW/ °C
Thermal Resistance - Junction to Ambient* Any single die "on" Both die "on" equally		 55.6 45.5	 °C/ W °C/ W

* The power which can be dissipated assuming the device is mounted in a typical manner on a PCB with copper equal to 2 inches square.

ZDT605

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C unless otherwise stated).

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	140		V	I_C=100µA
Collector-Emitter Breakdown Voltage	$V_{CEO(SUS)}$	120		V	I_C=10mA*
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	10		V	I_E=100µA
Collector Cutoff Current	I_{CBO}		0.01 10	µA µA	V_{CB}=120V V_{CB}=120V, T_{amb}=100°C
Collector Cutoff Current	I_{CES}		10	µA	V_{CES}=120V
Emitter Cutoff Current	I_{EBO}		0.1	µA	V_{EB}=8V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		1.0 1.5	V V	I_C=250mA, I_B=0.25mA* I_C=1A, I_B=1mA*
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		1.8	V	I_C=1A, I_B=1mA*
Base-Emitter TurnOn Voltage	$V_{BE(on)}$		1.7	V	I_C=1A, V_{CE}=5V*
Static Forward Current Transfer Ratio	h_{FE}	2K 5K 2K 0.5K	100K		I_C=50mA, V_{CE}=5V* I_C=500mA, V_{CE}=5V* I_C=1A, V_{CE}=5V* I_C=2A, V_{CE}=5V*
Transition Frequency	f_T	150		MHz	I_C=100mA, V_{CE}=10V f=20MHz
Input Capacitance	C_{ibo}	90 Typical		pF	V_{EB}=0.5V, f=1MHz
Output Capacitance	C_{obo}	15 Typical		pF	V_{CE}=10V, f=1MHz
Switching Times	t_{on}	0.5 Typical		µs	I_C=0.5A, V_{CE}=10V I_{B1}=I_{B2}=0.5mA
	t_{off}	1.6 Typical		µs	

*Measured under pulsed conditions. Pulse width=300µs. Duty cycle ≤2%

查询ZDT605供应商
捷多邦，专业PCB打样工厂，24小时加急出货

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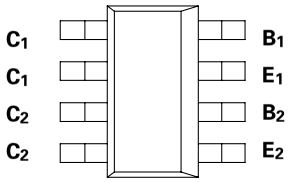

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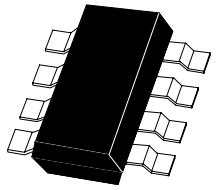

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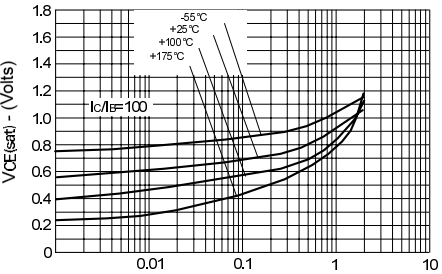
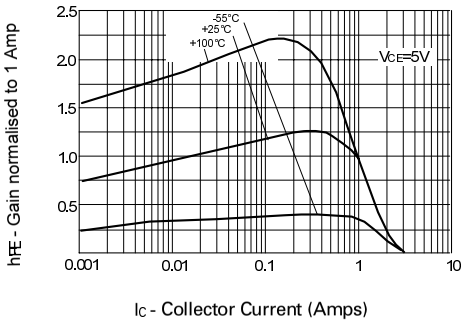
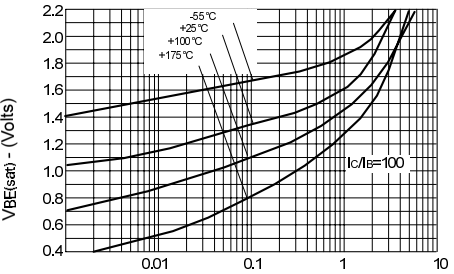
TYPICAL CHARACTERISTICS



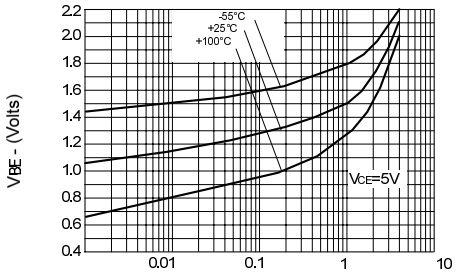
VCE(sat) v IC



hFE v IC



VBE(sat) v IC



VBE(on) v IC