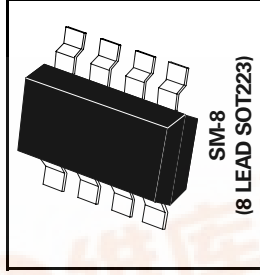
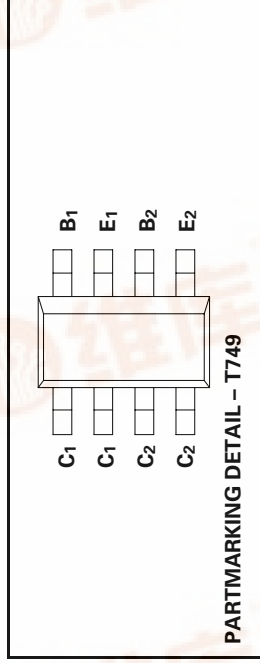


# SM-8 DUAL PNP MEDIUM POWER TRANSISTORS

ISSUE 1 - NOVEMBER, 1995

## ZDT749



[查询ZDT749供应商](#)

### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CB0}$	-35	V
Collector-Emitter Voltage	$V_{CE0}$	-25	V
Emitter-Base Voltage	$V_{EB0}$	-5	V
Peak Pulse Current	$I_{CM}$	-6	A
Continuous Collector Current	$I_C$	-2	A
Operating and Storage Temperature Range	$T_J, T_{stg}$	-55 to +150	$^{\circ}C$

### THERMAL CHARACTERISTICS

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

\* 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.

[捷多邦, 专业PCB打样工厂, 24小时加急出货](#)

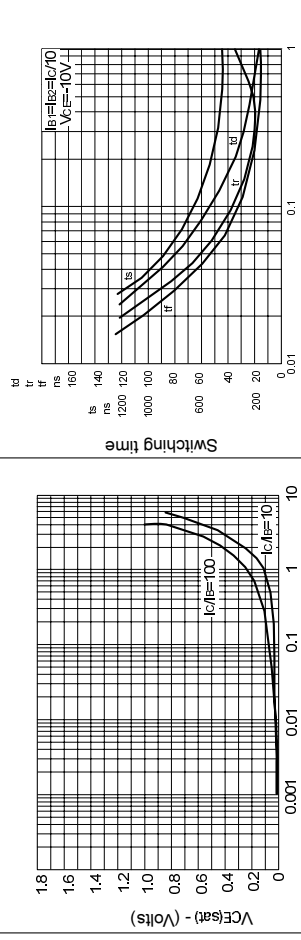


TYPICAL CHARACTERISTICS

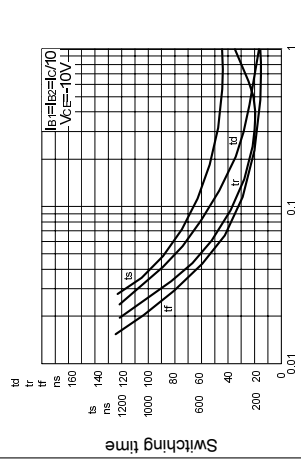
ELECTRICAL CHARACTERISTICS (at  $T_{amb} = 25^{\circ}\text{C}$  unless otherwise stated).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-35			V	$I_C = -100\mu\text{A}, I_E = 0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-25			V	$I_C = -10\text{mA}, I_B = 0^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			V	$I_E = -100\mu\text{A}, I_C = 0$
Collector Cutoff Current	$I_{CBO}$			-0.1 -10	$\mu\text{A}$ $\mu\text{A}$	$V_{CB} = -30\text{V}$ $V_{CB} = -30\text{V}, T_{amb} = 100^{\circ}\text{C}$
Emitter Cutoff Current	$I_{EBO}$			-0.1	$\mu\text{A}$	$V_{EB} = -4\text{V}, I_E = 0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-0.12 -0.23	-0.3 -0.5	V V	$I_C = 1\text{A}, I_B = -100\text{mA}^*$ $I_C = 2\text{A}, I_B = -200\text{mA}^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-0.9	-1.25	V	$I_C = 1\text{A}, I_B = -100\text{mA}^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$		-0.8	-1	V	$I_C = -1\text{A}, V_{CE} = -2\text{V}^*$
Static Forward Current Transfer Ratio	$h_{FE}$	70	200			$I_C = 50\text{mA}, V_{CE} = -2\text{V}^*$
		100	200			$I_C = 1\text{A}, V_{CE} = -2\text{V}^*$
		75	150	300		$I_C = 2\text{A}, V_{CE} = -2\text{V}^*$
		15	50			$I_C = 6\text{A}, V_{CE} = -2\text{V}^*$
Transition Frequency	$f_T$	100	160		MHz	$I_C = -100\text{mA}, V_{CE} = -5\text{V}$ $f = 100\text{MHz}$
Output Capacitance	$C_{obo}$		55	100	pF	$V_{CB} = -10\text{V}, f = 1\text{MHz}$
Switching Times	$t_{on}$		40		ns	$I_C = -500\text{mA}, V_{CC} = -10\text{V}$ $I_B = I_{B2} = -50\text{mA}$
				450		ns

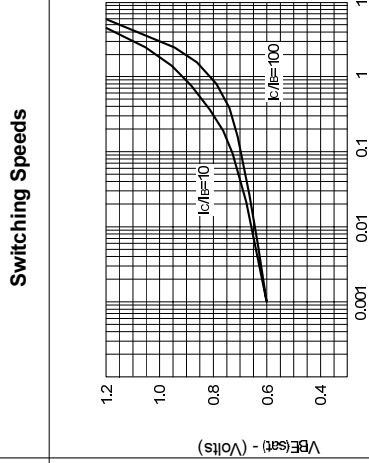
Measured under pulsed conditions. Pulse width=300 $\mu\text{s}$ . Duty cycle  $\leq 2\%$



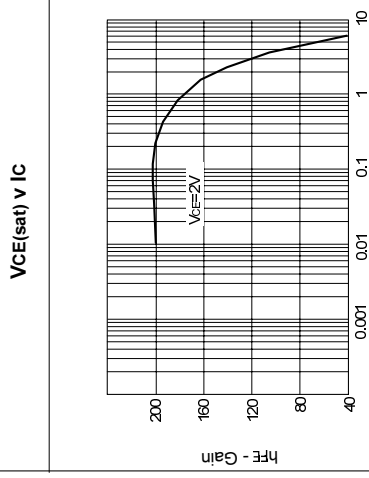
$V_{CE(sat)}$  v  $I_C$   
 $I_C$  - Collector Current (Amps)



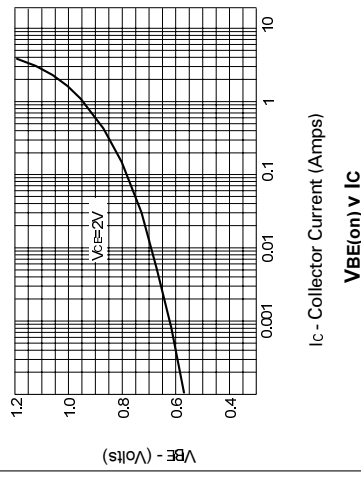
Switching Speeds  
 $I_C$  - Collector Current (Amps)



$V_{BE(sat)}$  v  $I_C$   
 $I_C$  - Collector Current (Amps)



$h_{FE}$  v  $I_C$   
 $I_C$  - Collector Current (Amps)



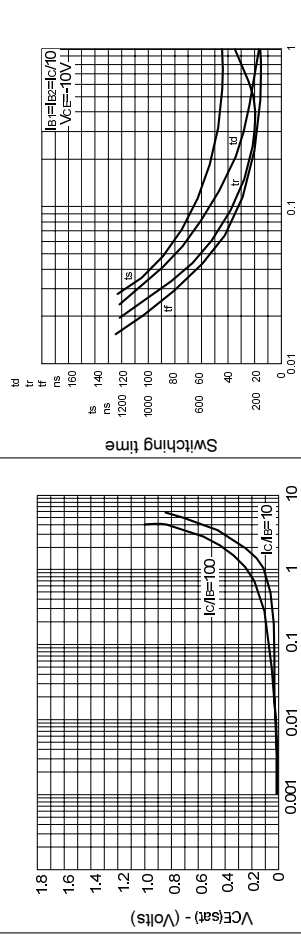
$V_{BE(on)}$  v  $I_C$   
 $I_C$  - Collector Current (Amps)

TYPICAL CHARACTERISTICS

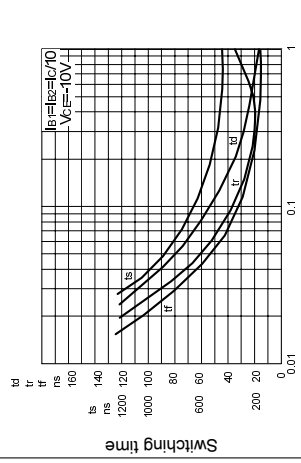
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Base-Emitter Turn-On Voltage	$V_{BE(on)}$		-0.8	-1	V	$I_C = -1\text{A}, V_{CE} = -2\text{V}^*$
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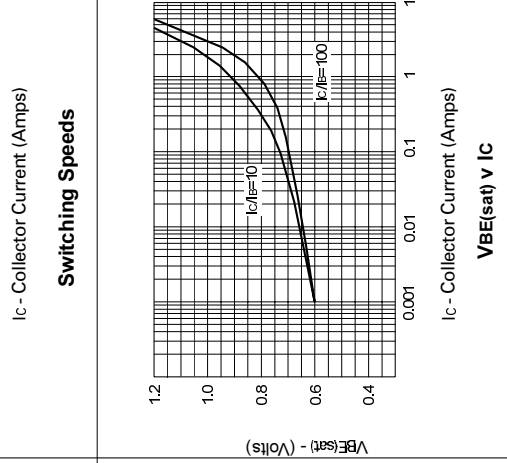
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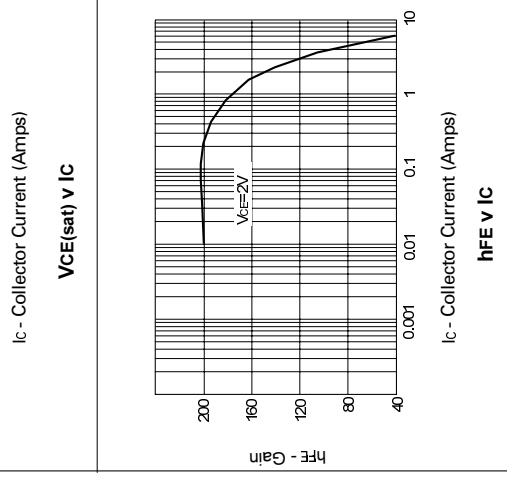
$V_{CE(sat)}$  v  $I_C$   
 $I_C$  - Collector Current (Amps)  
 **$V_{CE(sat)}$  v  $I_C$**



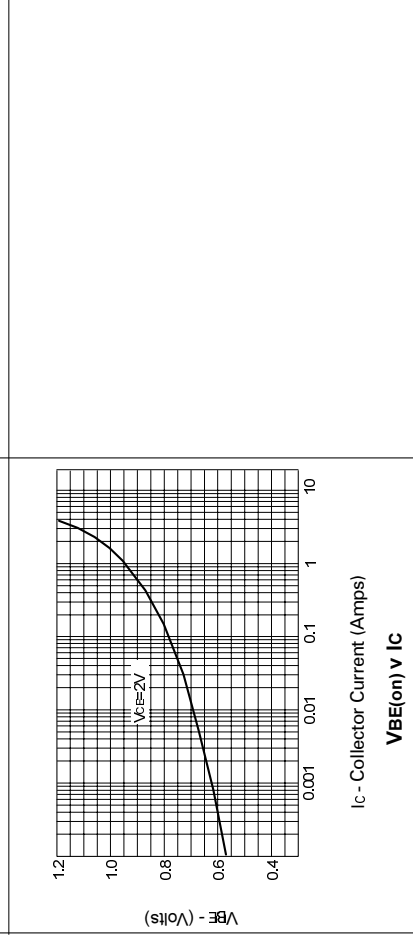
Switching time  
 $I_C$  - Collector Current (Amps)  
**Switching Speeds**



$V_{BE(sat)}$  v  $I_C$   
 $I_C$  - Collector Current (Amps)  
 **$V_{BE(sat)}$  v  $I_C$**



$h_{FE}$  v  $I_C$   
 $I_C$  - Collector Current (Amps)  
 **$h_{FE}$  v  $I_C$**



$V_{BE(on)}$  v  $I_C$   
 $I_C$  - Collector Current (Amps)  
 **$V_{BE(on)}$  v  $I_C$**