Silicon Darlington Transistor

2SD560 / D560

100V/5A

DATASHEET

OEM – Fujitsu

Source: Fujitsu Databook 1983

Datasheet Rev. 1.3 – 04/19 – data without warranty / liability

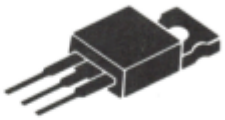
FUJITSU MICROELECTRONICS

2SD560

SILICON NPN EPITAXIAL DARLINGTON TRANSISTOR 5 AMP, 100 VOLT

DESCRIPTION

The 2SD560 is a low cost Darlington array which is perfectly suited for increasing TTL levels to drive print hammers, solenoids or motors.



ABSOLUTE MAXIMUM RATINGS (T_A = 25 °C)

Rating	Symbol	Condition	Value	Unit
Storage Temperature Range	T_{stg}		−55 ~ +150	°C
Junction Temperature	T_j		+150	°C
Collector-Base Voltage	V_{CBO}		150	V
Emitter-Base Voltage	V_{EBO}		7	V
Collector-Emitter Voltage	V_{CEO}		100	V
Collector Current-Continuous	I_C		5	A
Collector Current-Peak	I_{CP}	$P_W \leqq 10$ ms, D.R. $\leqq 50$ %	8	A
Base Current	I_B		0.5	A
Collector Power Dissipation	P_C	Ta = 25 °C	1.5	W
	P_C	Tc = 25 °C	30	W

ELECTRICAL CHARACTERISTICS (T_A = 25 °C)

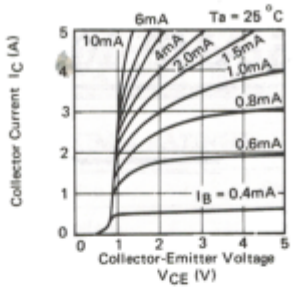
Characteristic	Symbol	Test Condition	Limit			Unit
			Min.	Typ.	Max.	
Collector Cutoff Current	I_{CBO}	V_{CB} = 100 V, I_E = 0	–	–	1	μA
DC Current Gain	h_{FE_1}	V_{CE} = 2V, I_C 3 A*	2000	4000	15000	–
	h_{FE_2}	V_{CE} = 2 V, I_C = 5 A*	500	–	–	–
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 3 A, I_B = 3 mA*	–	1.2	1.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		–	1.6	2.0	V
Turn On Time	t_{on}	I_C = 3 A, I_{B1} = $-I_{B2}$ = 3 mA R_L = 16.7 Ω, V_{CC} ≒ 50 V Test Circuit	–	0.5	–	μs
Storage Time	t_{stg}		–	1.0	–	μs
Fall Time	t_f		–	1.0	–	μs

* Pulsed $P_W \leqq 350$ μs, Duty Ratio $\leqq 2$ %

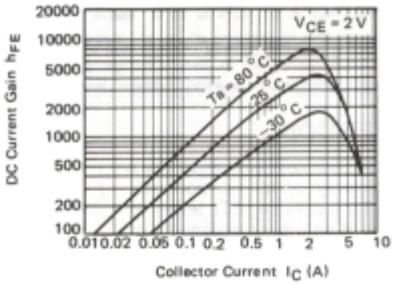
PACKAGE TYPE: TO-220. See page 5-23 for dimensions.

2SD560

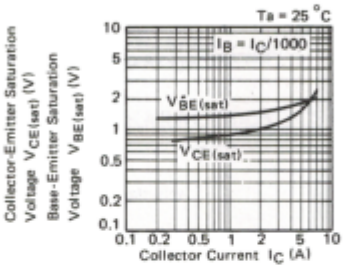
OUTPUT CHARACTERISTICS



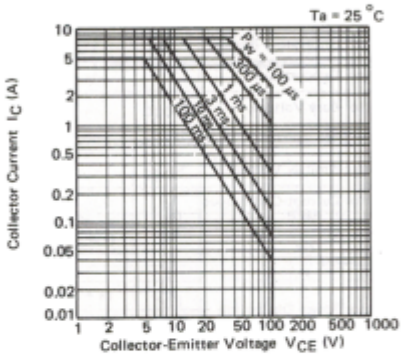
DC CURRENT GAIN



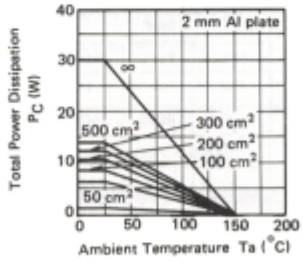
SATURATION VOLTAGE



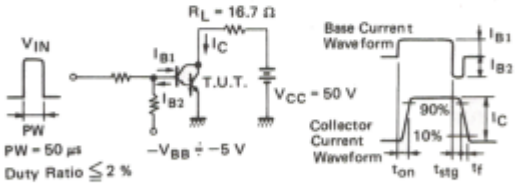
SAFE OPERATING AREA



TOTAL POWER DISSIPATION

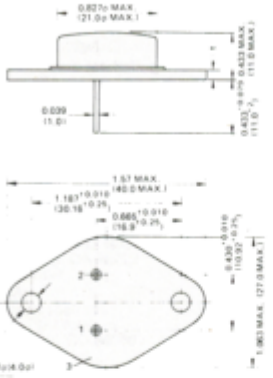


SWITCHING TIME TEST CIRCUIT



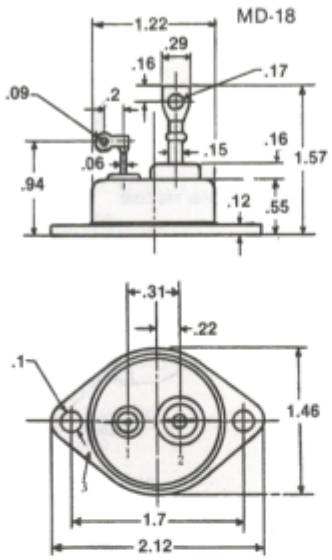
TRANSISTOR PACKAGING INFORMATION

JEDEC TO–3



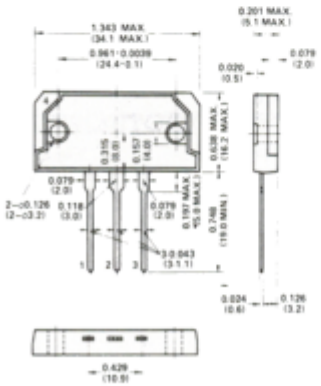
1: Base 2: Emitter 3: Collector (Case)
Dimension in inches and (millimeters)

MD-18



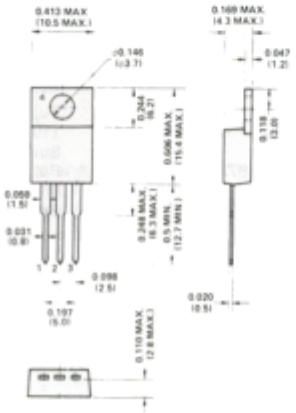
1: Base 2: Emitter 3: Collector

RM-60



1: Base 2: Collector 3: Emitter 4: Fin (Collector)
Dimension in inches and (millimeters)

JEDEC TO-220



1: Base 2: Collector 3: Emitter 4: Fin (Collector)
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