

FUJITSU
MICROELECTRONICS
FT5870
FT5871
TRIPLE DIFFUSED NPN
DARLINGTON TRANSISTOR

3749762 FUJITSU MICROELECTRONICS

T-33-29
37C 01873**ABSOLUTE MAXIMUM RATINGS**

Rating	Symbol	FT5870	FT5871	Unit
Collector-Emitter Voltage	V_{CEO}	400	500	V
Collector-Base Voltage	V_{CBO}	500	600	V
Emitter-Base Voltage	V_{EBO}	6	10	V
Collector Current-Continuous	I_C	15	10	A
Collector Current-Peak	$I_{C(peak)}$	30	30	A
Base Current-Continuous	I_B	3	1	A
Collector Power Dissipation ($T_C = 25^\circ\text{C}$)	P_C	150	80	W
Junction Temperature	T_J	175	175	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-65 ~ 175	-65 ~ 175	$^\circ\text{C}$

**FT5870 ELECTRICAL CHARACTERISTICS** ($T_A = 25^\circ\text{C}$)

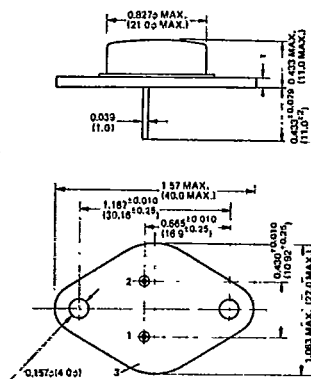
Parameter	Symbol	Test Conditions	Limits	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 500\text{V}$	100	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 6\text{V}$	30	mA
Collector-Emitter Breakdown Voltage	V_{CEO}	$I_C = 30\text{mA}$	400	V
DC Current Gain	h_{FE}	$V_{CE} = 2\text{V}, I_C = 10\text{A}$	100 min	—
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 10\text{A}, I_B = 0.1\text{A}$	1.8	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		2.5	V
Gain-Bandwidth Product	f_T	$V_{CE} = 12\text{V}, I_E = -0.5\text{A}$	7	MHz

FT5871 ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

Parameter	Symbol	Test Conditions	Limits	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 600\text{V}$	0.5 max	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 10\text{V}$	100 max	mA
Collector Cutoff Current	I_{CEO}	$V_{CE} = 500\text{V}$	1 max	mA
DC Current Gain	h_{FE}	$V_{CE} = 2\text{V}, I_C = 4\text{A}$	200 min	—
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 8\text{A}, I_B = 0.08\text{A}$	1.8 max	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		2.5 max	V

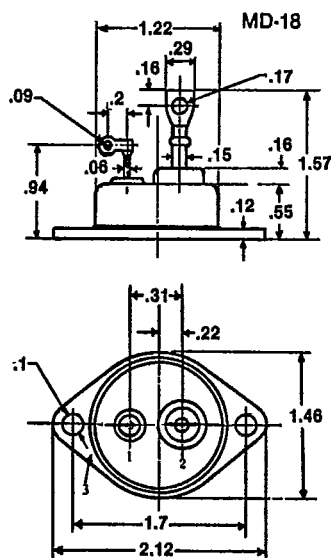
PACKAGE TYPE: TO-3. See page 5-23 for dimensions.

JEDEC TO-3

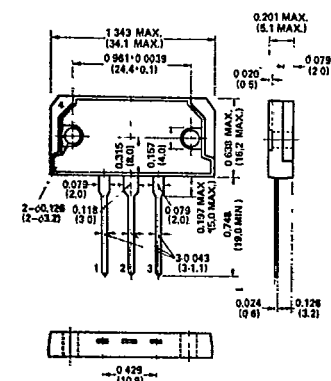


1: Base 2: Emitter 3: Collector (Case)
Dimension in inches and (millimeters)

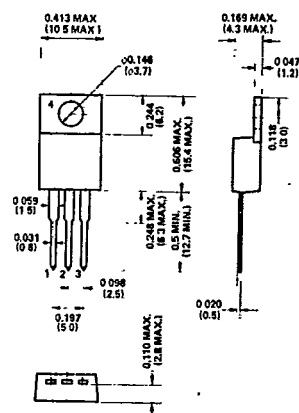
MD-18



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)
Dimension in inches and (millimeters)