

January 1990
Edition 1.1

FJITSU

T-43-25

PRODUCT PROFILE

FT5778M

Silicon Darlington Transistor Array

ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

Rating	Symbol	Conditions	Value		Unit
			NPN	PNP	
Storage Temperature	T _{stg}		-55 ~ +150		°C
Junction Temperature	T _j		+150		°C
Collector to Base Voltage	V _{CB0}		100	-100	V
Emitter to Base Voltage	V _{EB0}		5	-5	V
Collector to Emitter Voltage	V _{CEO}		100	-100	V
Collector Current	(Continuous)	P _W ≤ 1 ms, D.R. ≤ 50%	±5	±5	A
	(Pulsed)		±8	±8	A
Base Current (Continuous)	I _B		0.5	-0.5	A
Isolation Voltage	V _{iso}	Fin 13 - Pin 1 ~ 12	500		V _{r.m.s.}
Collector Power Dissipation	P _C	Ta = 25°C: Single DLT Operation	2.5		W
Total Power Dissipation	P _T	Ta = 25°C: 4-DLT Operation	5		W
Total Power Dissipation	P _T	Tc = 25°C: 4-DLT Operation	25		W

DLT: Darlington Transistor

ELECTRICAL CHARACTERISTICS (SINGLE DARLINGTON TRANSISTOR OPERATION)
[NPN]

Parameter	Symbol	Test Condition	Limit			Unit
			Min.	Typ.	Max.	
Collector to Base Breakdown Voltage	V _{(BR)CBO}	I _C = 100 μA, I _E = 0	100	—	—	V
Emitter to Base Breakdown Voltage	V _{(BR)EBO}	I _E = 5 mA, I _C = 0	5	—	—	V
Collector to Emitter Breakdown Voltage	V _{(BR)CEO}	I _C = 25 mA, R _{BE} = ∞ Ω	100	—	—	V
Collector Cutoff Current	I _{CBO}	V _{CB} = 100 V, I _E = 0	—	—	10	μs
DC Current Gain	h _{FE1}	I _C = 3 A, V _{CE} = 5 V *	2000	6000	15000	—
	h _{FE2}	I _C = 5 A, V _{CE} = 5 V *	500	—	—	—
Collector to Emitter Saturation Voltage	V _{CE(sat)}	I _C = 3 A, I _B = 6 mA *	—	1.2	1.5	V
Base to Emitter Saturation Voltage	V _{BE(sat)}		—	1.6	2.0	V
Turn-On Time	t _{on}	V _{CC} = 30 V	—	1	—	μs
Storage Time	t _{stg}	I _C = 3 A	—	2	—	μs
Fall Time	t _f	I _{B1} = -I _{B2} = 3 mA	—	1	—	μs

[PNP]

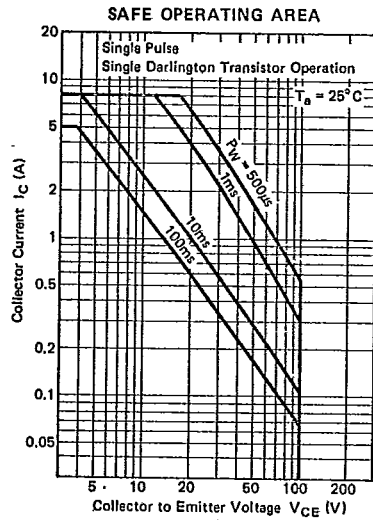
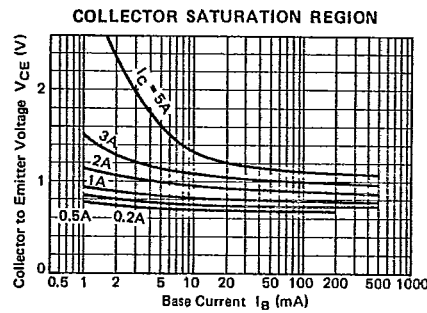
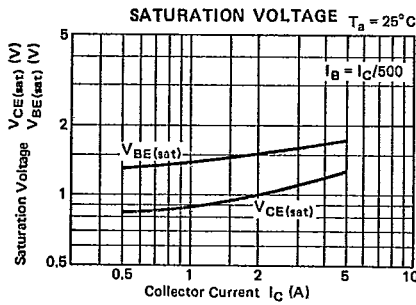
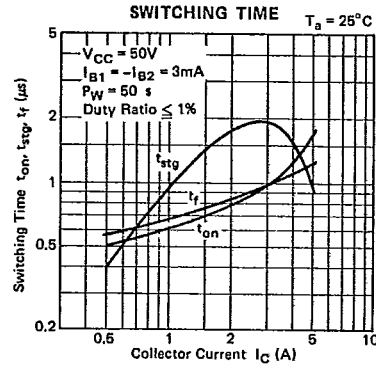
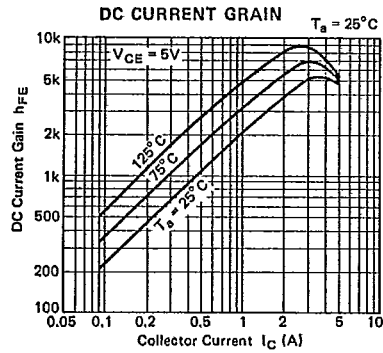
Collector to Base Breakdown Voltage	V _{(BR)CBO}	I _C = -100 μA, I _E = 0	-100	—	—	V
Emitter to Base Breakdown Voltage	V _{(BR)EBO}	I _E = -150 mA, I _C = 0	-5	—	—	V
Collector to Emitter Breakdown Voltage	V _{(BR)CEO}	I _C = -2 mA, R _{BE} = ∞ Ω	-100	—	—	V
Collector Cutoff Current	I _{CBO}	V _{CB} = -100 V, I _E = 0	—	—	-10	μs
DC Current Gain	h _{FE1}	I _C = -3 A, V _{CE} = -5 V *	2000	6000	15000	—
	h _{FE2}	I _C = -5 A, V _{CE} = -5 V *	500	—	—	—
Collector to Emitter Saturation Voltage	V _{CE(sat)}	I _C = -3 A, I _B = -6 mA *	—	-1.1	-1.5	V
Base to Emitter Saturation Voltage	V _{BE(sat)}		—	-1.7	-2.0	V
Turn-On Time	t _{on}	V _{CC} = -30 V	—	0.4	—	μs
Storage Time	t _{stg}	I _C = -3 A	—	1.2	—	μs
Fall Time	t _f	I _{B1} = -I _{B2} = -6 mA	—	0.5	—	μs

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* Pulsed P_W ≤ 300 μs, D.R. ≤ * 6%

FT5778M

[NPN]



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[PNP]

