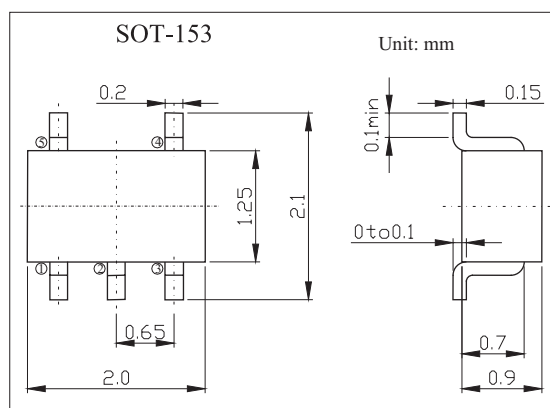
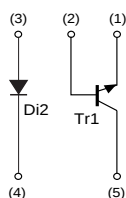


General purpose transistor (isolated transistor and diode)

FML10

■ Features

- Tr1: Low $V_{CE(sat)}$
- Di : Low V_F
- Small package



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Tr1			
Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	15	V
Collector-emitter voltage	V_{CEO}	12	V
Emitter-base voltage	V_{EBO}	6	V
Collector current	I_C	1.5	A
Power dissipation	P_D	200	mW
Operating and Storage and Temperature Range	T_j, T_{STG}	-40 to +125	$^\circ\text{C}$

Di2			
Parameter	Symbol	Rating	Unit
Peak reverse voltage	V_{RM}	25	V
Reverse voltage (DC)	V_R	20	V
Average rectified forward current	I_F	700	mA
Forward current surge peak (60HZ, 1 ∞)	I_{FSM}	3	A
Operating and Storage and Temperature Range	T_j, T_{STG}	-40 to +125	$^\circ\text{C}$

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■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Transistor TR1						
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 10\ \mu A, I_E = 0$	15			V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\ mA, I_B = 0$	12			V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_C = 10\ \mu A, I_C = 0$	6			V
Collector cutoff current	I_{CBO}	$V_{CB}=15V, I_E=0$			100	nA
Emitter cutoff current	I_{EBO}	$V_{EB}=6V, I_C=0$			100	nA
DC current gain	h_{FE}	$V_{CE}=2V, I_C=200mA$	270		680	
collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C = 500\ mA; I_B = 25\ mA$			0.2	V
Transition frequency	f_T	$I_C = 200\ mA; V_{CE} = 2\ V; f = 100\ MHz$		400		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V, I_E=0A, f=1MHz$		12		pF
Di2						
Forward voltage	V_F	$I_F=700mA$			490	mV
Reverse current	I_R	$V_R=20V$			200	μA

* pulse test: Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2.0\%$.

■ Marking

Marking	L10
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■ Typical Characteristics

Tr1

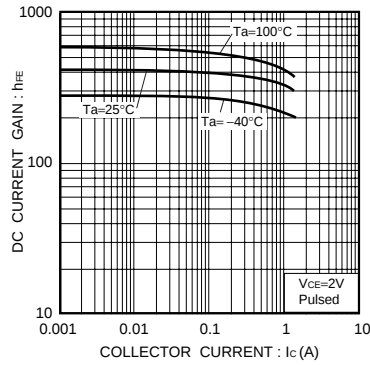


Fig.1 DC current gain vs. collector current

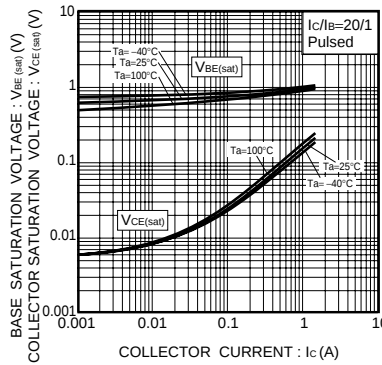


Fig.2 Collector-emitter saturation voltage vs. collector current

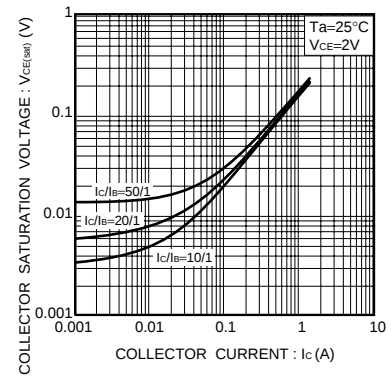


Fig.3 Collector-emitter saturation voltage vs. collector current

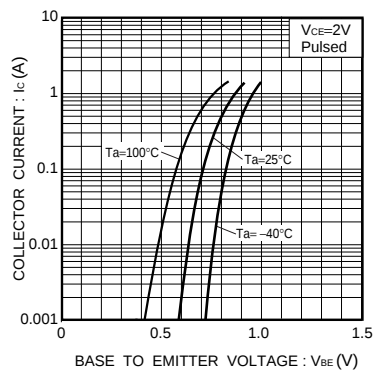


Fig.4 Grounded emitter propagation characteristics

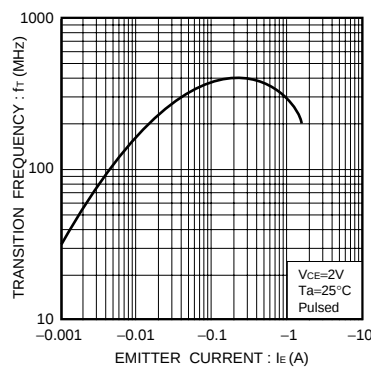


Fig.5 Gain bandwidth product vs. emitter current

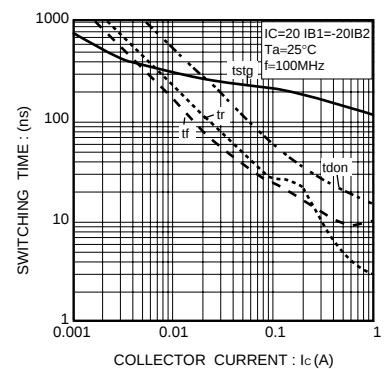


Fig.6 Switching time

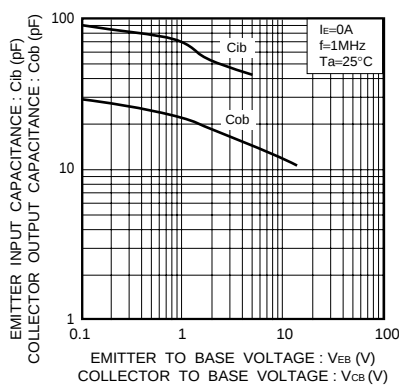
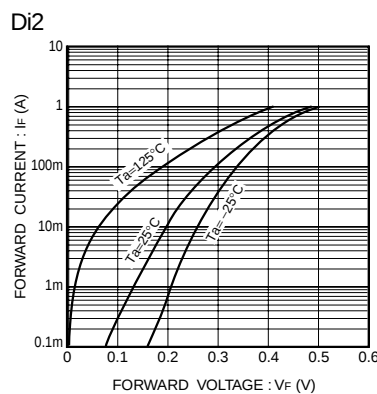
Fig.7 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

Fig.8 Forward characteristics

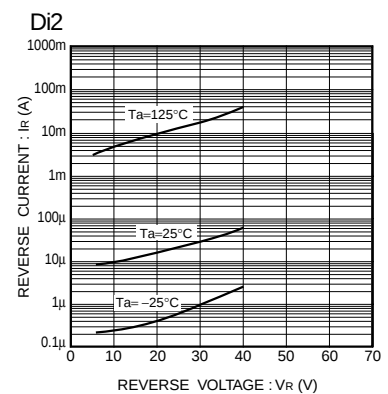


Fig.9 Reverse characteristics