General purpose transistor (isolated transistor and diode) EML4/UML4N

2SC5585 and RB521S-30 are housed independently in a EMT5 or UMT5 package.

Applications

DC / DC converter Motor driver

Features

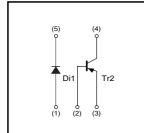
 Tr : Low Vce(sat) Di : Low VF
 Small package

Structure

PNP Silicon epitaxial planar transistor Schottky barrier diode

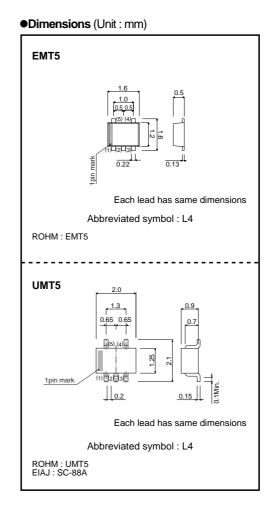
The following characteristics apply to both Di1 and Tr2.

Equivalent circuit



Packaging specifications

Туре	EML4	UML4N
Package	EMT5	UMT5
Marking	L4	L4
Code	T2R	TR
Basic ordering unit(pieces)	8000	3000



1/4

Transistors

•Absolute maximum ratings (Ta=25°C)

Di1

Parameter	Symbol	Limits	Unit
Average rectified forward current	lo	200	mA
Forward current surge peak (60Hz, 1∞)	IFSM	1	А
Reverse voltage (DC)	Vr	30	V
Junction temperature	Tj	125	°C

Tr2

Parameter	Symbol	Limits	Unit
Collector-base voltage	Vсво	–15	V
Collector-emitter voltage	VCEO	-12	V
Emitter-base voltage	Vebo	-6	V
Collector current	lc	-500	mA
	Іср	-1	A
Power dissipation	Pd	120	mW *
Junction temperature	Tj	150	°C

* Each terminal mounted on a recommended.

Di1/DTr2

Parameter	Symbol	Limits	Unit
Power dissipation	Pd	150	mW *
Storage temperature	Tstg	-55 to +125	°C
* Each terminal mounted on a recommended.			

•Electrical characteristics (Ta=25°C)

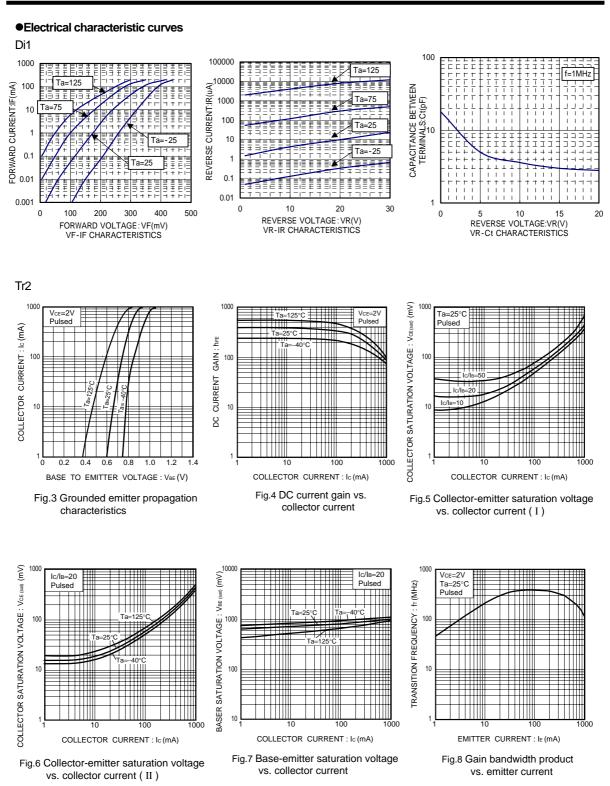
Di1

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Forward voltage	VF	-	0.40	0.50	V	I⊧=200mA
Reverse current	IR	_	4.0	30	μA	V _R =10V

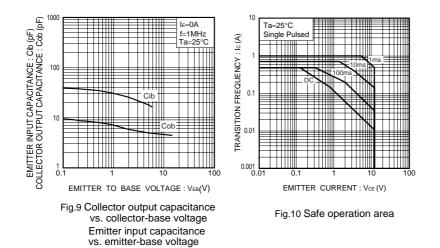
Tr2

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Collector-emitter breakdown voltage	BVCEO	-12	-	-	V	Ic=-1mA
Collector-base breakdown voltage	ВУсво	-15	-	-	V	Ic=-10μA
Emitter-base breakdown voltage	ВVево	-6	-	-	V	Iε=-10μA
Collector cut-off current	Ісво	-	-	-100	nA	Vcb=-15V
Emitter cut-off current	Іево	-	-	-100	nA	Veb=-6V
Collector-emitter saturation voltage	VCE(sat)	-	-100	-250	mV	Ic=-200mA, IB=-10mA
DC current gain	hfe	270	-	680	-	Vce=-2V, Ic=-10mA
Transition frequency	f⊤	-	260	-	MHz	Vce=-2V, Ie=10mA, f=100MHz
Collector output capacitance	Cob	-	6.5	-	pF	Vcb=-10V, IE=0mA, f=1MHz

Transistors



Transistors



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Appendix1-Rev2.0

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