



Micro Commercial Components



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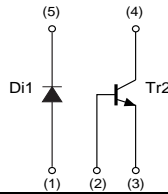
# UML6N

## ISOLATED

## TRANSISTOR AND DIODES

### Features

- Halogen free available upon request by adding suffix "-HF"
- 2SC5585 and RB521S-30 are housed independently
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1



### MARKING:L6

#### ●Absolute maximum ratings (Ta=25°C)

Di1

Parameter	Symbol	Limits	Unit
Average rectified forward current	$I_o$	200	mA
Forward current surge peak (60Hz, 1∞)	$I_{FSM}$	1	A
Reverse voltage (DC)	$V_R$	30	V
Junction temperature	$T_j$	125	°C

Tr2

Parameter	Symbol	Limits	Unit
Collector-base voltage	$V_{CBO}$	15	V
Collector-emitter voltage	$V_{CEO}$	12	V
Emitter-base voltage	$V_{EBO}$	6	V
Collector current	$I_c$	500	mA
	$I_{CP}$	1	A
Power dissipation	$P_d$	120	mW *1
Junction temperature	$T_j$	150	°C

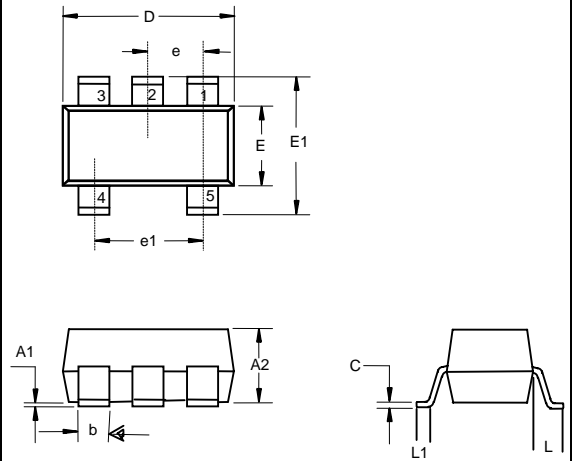
\*1 Each terminal mounted on a recommended.

Di1 / Tr2

Parameter	Symbol	Limits	Unit
Power dissipation	$P_d$	150	mW *
Storage temperature	$T_{stg}$	-55 to +125	°C

\* Each terminal mounted on a recommended.

### SOT-353



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A1	---	.004	---	0.100	
A2	.035	.039	0.900	1.000	
b	.006	.014	0.150	0.350	
c	.003	.006	0.080	0.150	
D	0.79	.087	2.000	2.200	
E	.045	.053	1.150	1.350	
E1	.085	.096	2.150	2.450	
e	.026TYP		0.650TYP		
e1	.047	.055	1.200	1.400	
L	.021REF		0.525REF		
L1	.010	.018	0.260	0.460	

**●Electrical characteristics (Ta=25°C)**

Di1

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V <sub>F</sub>	–	0.40	0.50	V	I <sub>F</sub> =200mA
Reverse current	I <sub>R</sub>	–	4.0	30	μA	V <sub>R</sub> =10V

Tr2

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-emitter breakdown voltage	BV <sub>CEO</sub>	12	–	–	V	I <sub>C</sub> =1mA
Collector-base breakdown voltage	BV <sub>CBO</sub>	15	–	–	V	I <sub>C</sub> =10μA
Emitter-base breakdown voltage	BV <sub>EBO</sub>	6	–	–	V	I <sub>E</sub> =10μA
Collector cut-off current	I <sub>CBO</sub>	–	–	100	nA	V <sub>CB</sub> =15V
Emitter cut-off current	I <sub>EBO</sub>	–	–	100	nA	V <sub>EB</sub> =6V
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	–	90	250	mV	I <sub>C</sub> =200mA, I <sub>B</sub> =10mA
DC current gain	h <sub>FE</sub>	270	–	680	–	V <sub>CE</sub> =2V, I <sub>C</sub> =10mA
Transition frequency	f <sub>T</sub>	–	320	–	MHz	V <sub>CE</sub> =2V, I <sub>E</sub> =–10mA, f=100MHz
Collector output capacitance	C <sub>ob</sub>	–	7.5	–	pF	V <sub>CB</sub> =10V, I <sub>E</sub> =0mA, f=1MHz

# Typical Characteristics

● Electrical characteristic curves

Di1

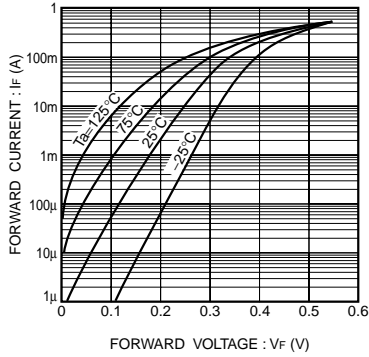


Fig.1 Forward characteristics

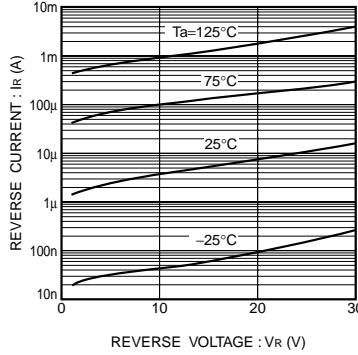


Fig.2 Reverse characteristics

Tr2

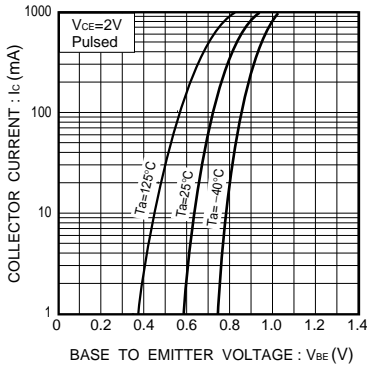


Fig.3 Grounded emitter propagation characteristics

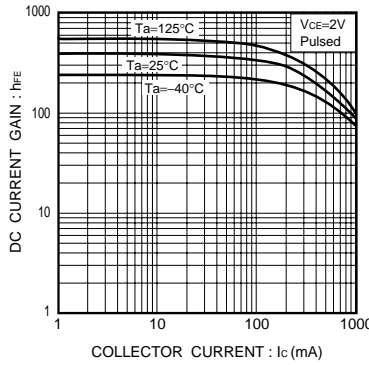


Fig.4 DC current gain vs. collector current

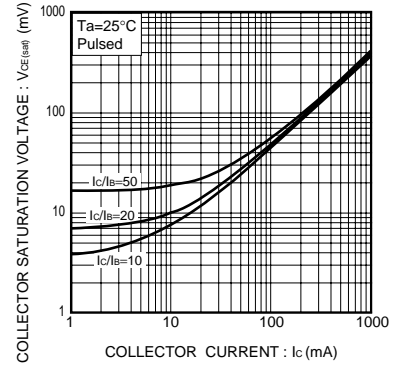


Fig.5 Collector-emitter saturation voltage vs. collector current ( I )

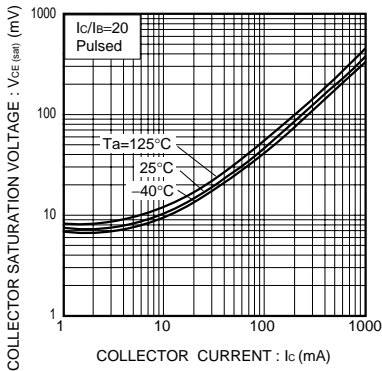


Fig.6 Collector-emitter saturation voltage vs. collector current ( II )

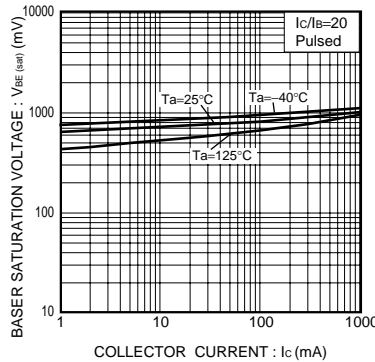


Fig.7 Base-emitter saturation voltage vs. collector current

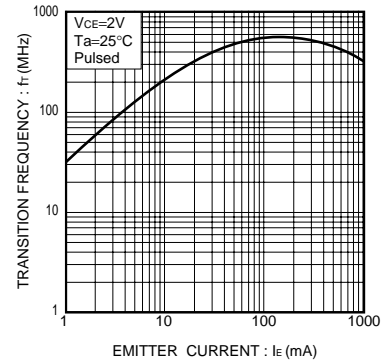


Fig.8 Gain bandwidth product vs. emitter current



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### Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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