

UMX11N

Transistor, dual, NPN

Features

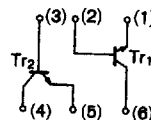
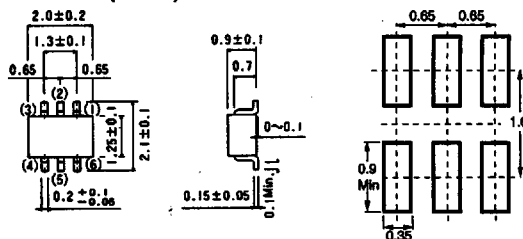
- available in UMT6 (UMT6) package
- package marking: X11
- package contains two independent NPN transistors (2SC2059K)
- same size as UMT3 (UMT, C-70) so same placement machine can be used for both
- no mutual interference between the transistors

Applications

- radio frequency amplifier

Dimensions (Units : mm)

UMX11N (UMT6)



- (1) Tr1 emitter
- (2) Tr1 base
- (3) Tr2 base
- (4) Tr2 collector
- (5) Tr2 emitter
- (6) Tr1 collector

Absolute maximum ratings ($T_a = 25^\circ\text{C}$, common for Tr_1 and Tr_2)

Parameter	Symbol	Limits	Unit	Conditions
Collector-to-base voltage	V_{CBO}	25	V	
Collector-to-emitter voltage	V_{CEO}	20	V	
Emitter-to-base voltage	V_{EBO}	4	V	
Collector current	I_{C}	20	mA	
Collector dissipation	P_{C}	150	mW	Do not exceed 120 mW per element
Junction temperature	T_{J}	150	$^\circ\text{C}$	
Storage temperature	T_{stg}	$-55 \sim +150$	$^\circ\text{C}$	

Electrical characteristics (unless otherwise noted, $T_a = 25^\circ\text{C}$, common for Tr_1 and Tr_2)

Parameter	Symbol	Min	Typical	Max	Unit	Conditions
Collector-to-base breakdown voltage	BV_{CBO}	25			V	$I_{\text{C}} = 10 \mu\text{A}$
Collector-to-emitter breakdown voltage	BV_{CEO}	20			V	$I_{\text{C}} = 1 \text{ mA}$
Emitter-to-base breakdown voltage	BV_{EBO}	4			V	$I_{\text{E}} = 10 \mu\text{A}$
Collector cutoff current	I_{CBO}			0.5	μA	$V_{\text{CB}} = 20 \text{ V}$
Emitter cutoff current	I_{EBO}			0.5	μA	$V_{\text{EB}} = 3 \text{ V}$
DC current gain	h_{FE}	39		180		$V_{\text{CE}} = 6 \text{ V}$, $I_{\text{C}} = 1 \text{ mA}$
Collector-to-emitter saturation voltage	$V_{\text{CE(sat)}}$		0.1		V	$I_{\text{C}}/I_{\text{B}} = 10 \text{ mA}/1 \text{ mA}$

Electrical characteristic curves

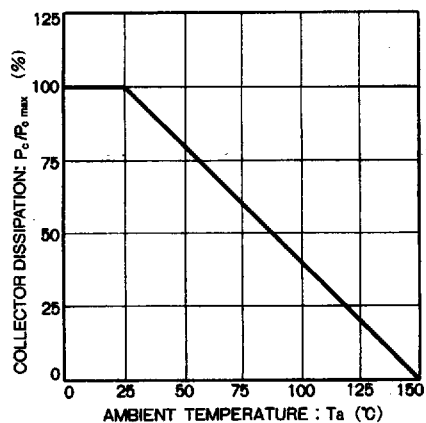


Figure 1

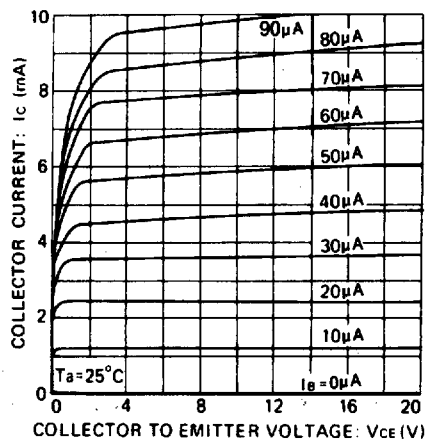


Figure 2

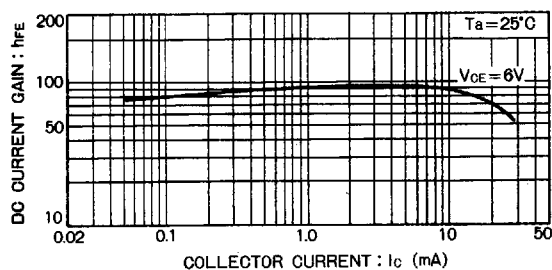


Figure 3

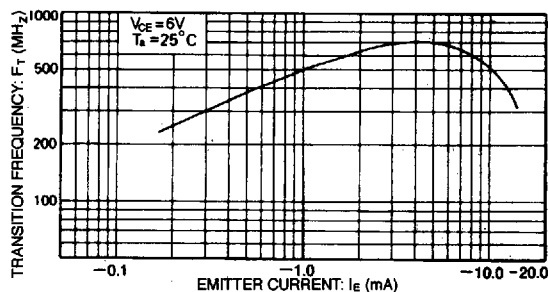


Figure 4

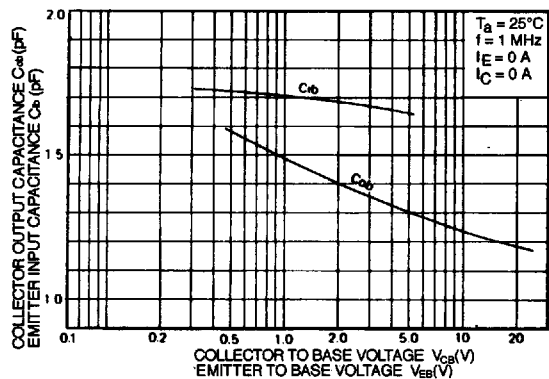


Figure 5

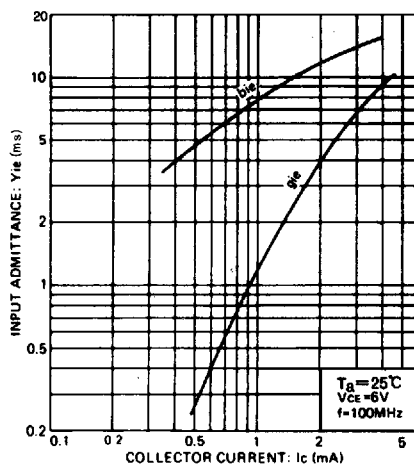
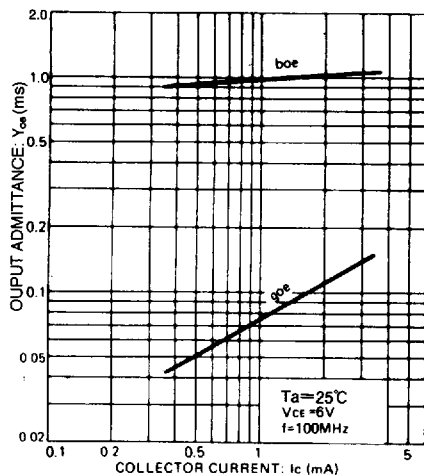
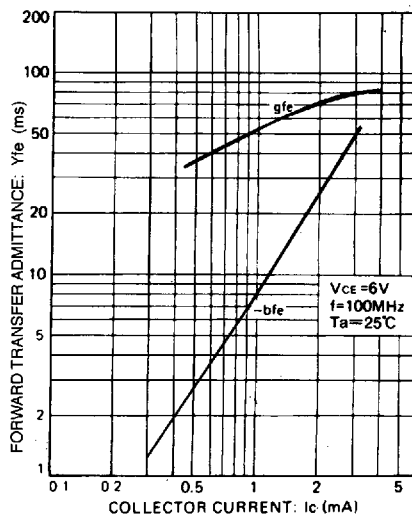
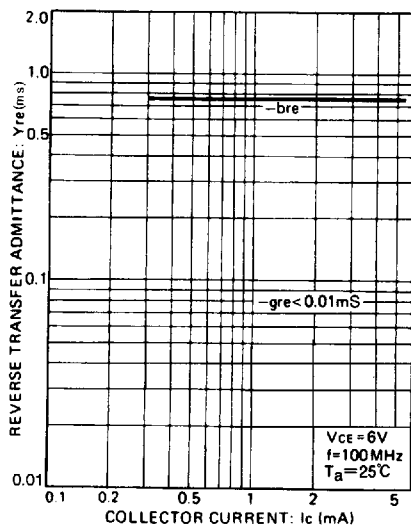


Figure 6


Figure 7

Figure 8

Figure 9

Ordering information

Package	Tape
Code	TR
Basic order quantity	3000
UMX11N	☆
★ = Standard, ☆ = Semi-standard, * = Special order	