

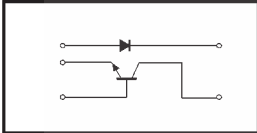
Low-frequency transistor (isolated transistor and diode)

UML2N

●Features

- 1) The 2SC2412K and a diode are housed independently in a UMT package.

●Circuit diagram



●Package, marking, and packaging specifications

Part No.	UML2N
Package	UMT5
Marking	L2
Code	TR
Basic ordering unit (pieces)	3000

●Electrical characteristics (Ta = 25°C)

Tr						
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-emitter breakdown voltage	BV _{CEO}	50	—	—	V	I _C =1mA
Collector-base breakdown voltage	BV _{CBO}	60	—	—	V	I _C =50 μA
Emitter-base breakdown voltage	BV _{EBO}	6	—	—	V	I _E =50 μA
Collector cutoff current	I _{CBO}	—	—	0.1	μA	V _{CB} =60V
Emitter cutoff current	I _{EBO}	—	—	0.1	μA	V _{EB} =5V
Collector-emitter saturation voltage	V _{CE(sat)}	—	—	0.4	V	I _C /I _B =50mA/5mA
DC current transfer ratio	h _{FE}	120	—	560	—	V _{CE} =6V, I _C =1mA
Transition frequency	f _T	—	180	—	MHz	V _{CE} =12V, I _E =2mA, f=100MHz
Output capacitance	C _{ob}	—	2	3.5	pF	V _{CB} =12V, I _E =0A, f=1MHz

Di						
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V _F	—	—	1.2	V	I _F =100mA
Reverse current	I _R	—	—	0.1	μA	V _R =70V
Capacitance between terminals	C _T	—	—	3.5	pF	V _R =6V, f=1MHz
Reverse recovery time	t _{rr}	—	—	4	ns	V _R =6V, I _F =5mA, R _L =50 Ω

●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V _{CBO}	60	V
Collector-emitter voltage	V _{CEO}	50	V
Emitter-base voltage	V _{EBO}	6	V
Collector current	I _C	0.15	A
Collector power dissipation	P _C	0.15	W
Junction temperature	T _J	150	°C
Storage temperature	T _{stg}	−55~+150	°C

Parameter	Symbol	Limits	Unit
DC reverse voltage	V _R	80	V
Peak reverse voltage	V _{RM}	80	V
Mean rectifying current	I _o	0.1	A
Peak forward voltage	I _{FM}	0.3	A
Surge current	I _{surge}	4	A
Junction temperature	T _J	150	°C
Storage temperature	T _{stg}	−55~+150	°C
Specified I/O frequencies	f	100	MHz

