

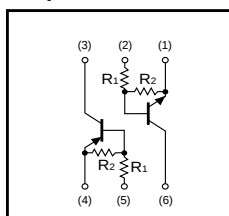
Power management (dual digital transistors)

EMD12 / UMD12N

●Features

- 1) Both the DTA144E and DTC144E in a EMT or UMT package.

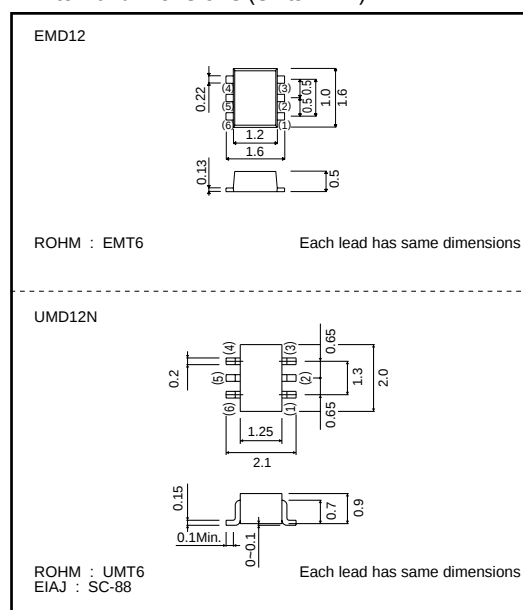
●Equivalent circuit



●Package, marking, and packaging specifications

Type	EMD12	UMD12N
Package	EMT6	UMT6
Marking	D12	D12
Code	T2R	TR
Basic ordering unit (pieces)	8000	3000

●External dimensions (Units : mm)



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Supply voltage	V_{CC}	50	V
Input voltage	V_{IN}	40 -10	V
Output current	I_C	100	mA
	I_O	30	mA
Power dissipation	P_d	150(TOTAL)	mW *1
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55~+150	°C

*1 120mW per element must not be exceeded.
PNP type negative symbols have been omitted

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage	$V_{I(off)}$	—	—	0.5	V	$V_{CC}=5/-5V$, $I_O=100/-100\mu A$
	$V_{I(on)}$	3	—	—	V	$V_O=0.3/-0.3V$, $I_O=2/-2mA$
Output voltage	$V_{O(on)}$	—	—	0.3	V	$I_O=10/-10mA$, $I_I=0.5/-0.5mA$
Input current	I_I	—	—	0.18	mA	$V_I=5/-5V$
Output current	$I_{O(off)}$	—	—	0.5	μA	$V_{CC}=50/-50V$, $V_I=0V$
DC current gain	G_I	68	—	—	—	$I_O=5/-5mA$, $V_O=5/-5V$
Transition frequency	f_r	—	250	—	MHz	$V_{CE}=10/-10V$, $I_E=-5/5mA$, $f=100MHz$ *
Input resistance	R_I	32.9	47	61.1	k Ω	—
Resistance ratio	R_2/R_1	0.8	1	1.2	—	—

*Transition frequency of the device. PNP type negative symbols have been omitted