

Surface Mount Type Packages

VMT3 (1) Base (2) Emitter (3) Collector	EMT3 Flat lead (SC-89) <SOT-490> (1) Base (2) Emitter (3) Collector	
EMT3 (SC-75A) <SOT-416> (1) Emitter/Source (2) Base/Gate (3) Collector/Drain	EMT5 (1) Base/Gate (2) Emitter/Source (3) Collector/Drain	EMT6 (1) Base/Gate (2) Emitter/Source (3) Collector/Drain
UMT3 (SC-70) <SOT-323> (1) Emitter/Source (2) Base/Gate (3) Collector/Drain	UMT5 (SC-88A) <SOT-353> (1) Base/Gate (2) Emitter/Source (3) Collector/Drain	UMT6 (SC-88) <SOT-363> (1) Base/Gate (2) Emitter/Source (3) Collector/Drain
SMT3 (SC-59) <SOT-346> (1) Emitter/Source (2) Base/Gate (3) Collector/Drain	SMT5 (SC-74A) (1) Base/Gate (2) Emitter/Source (3) Collector/Drain	SMT6 (SC-74) <SOT-457> (1) Base/Gate (2) Emitter/Source (3) Collector/Drain
SST3 <SOT-23> (1) Emitter/Source (2) Base/Gate (3) Collector/Drain	MPT3 (SC-62) <SOT-89> (1) Base/Gate (2) Collector/Drain (3) Emitter/Source	

External Dimensions (unit: mm)

Complex Digital Transistors

PNP/NPN Combination Circuits

Configuration	Package		Equivalent circuit diagram	EMT5/6	UMT5/6	SMT5/6
	Application	Item		■	■	■
Part No.						
PNP+NPN	Potential divider type		EMD2	UMD2N	IMD2A	
	Leak absorption type		EMD3	UMD3N	IMD3A	
	Potential divider type		EMD9	UMD9N	IMD9A	
	Leak absorption type		EMD12	UMD12N	-	
	Input resistor type		-	-	IMD14	
	Power management		-	-	IMD1A	
-			-	IMD8A		
			-	-	IMD10A	
			-	-	IMD16A	



Features

- Reduced bill of materials.
- PCB space saving (reduced size).
- Available in NPN, PNP circuits or a complementary of both.
- Combination circuits suitable for many applications including power management and switching.
- High level of integration.
- Reduced storage space.
- Reduced assembly time and associated costs.

Downsize and Integrate Rohm Discrete Technology

Small Signal Transistors and Resistors		Digital Transistors		Complex Digital Transistors
1 x 2SA1037K 1 x 2SC2412 + 2 x 10KΩ Resistors 2 x 47KΩ Resistors	Equals	2 x DTA114Y	Equals	1 x EMB9

SMT6 (SC-74) <SOT-457>

Each lead has same dimensions

UMT6 (SC-88) <SOT-363>

Each lead has same dimensions

EMT6

Each lead has same dimensions

	Equals		Equals	
BOM 6		BOM 2		BOM 1

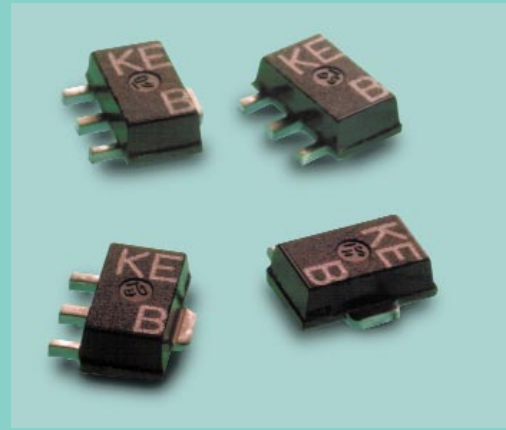
DOWNSIZE AND INTEGRATE

The products listed in this catalogue are designed to be used with ordinary electronic equipment or devices (such as audio visual equipment, office-automation equipment, communications devices, electrical appliances and electrical toys). Should you intend to use these products with equipment or devices which require an extremely high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), please be sure to consult with our sales representative first.

Complex Digital Transistors (continued)

PNPx2 Circuits

Configuration	Package		Equivalent circuit diagram	EMT5/6	UMT5/6	SMT5/6
	Application	Item		■	■	■
PNPx2	Potential divider type		-	UMA1N	FMA1A	
			EMA2	UMA2N	FMA2A	
	Leak absorption type		EMA5	UMA5N	FMA5A	
			EMA7	UMA7N	FMA7A	
	Potential divider type		EMA8	UMA8N	FMA8A	
			-	UMA9N	FMA9A	
	Leak absorption type		-	UMA10N	FMA10A	
			EMA11	UMA11N	FMA11A	
	Input resistor type		EMA3	UMA3N	FMA3A	
			EMA4	UMA4N	FMA4A	
			EMA6	UMA6N	FMA6A	
	Potential divider type		-	UMB1N	IMB1A	
			EMB2	UMB2N	IMB2A	
	Leak absorption type		EMB9	UMB9N	IMB9A	
			EMB10	UMB10N	IMB10A	
	Potential divider type		EMB11	UMB11N	IMB11A	
	Leak absorption type		-	-	IMB16	
			-	UMB5N	IMB5A	
Potential divider type		EMB6	UMB6N	IMB6A		
		-	-	IMB17A		
Input resistor type		EMB3	UMB3N	IMB3A		
		EMB4	UMB4N	IMB4A		
		-	-	IMB7A		
-	-	-	UMB8N	IMB8A		



Small Signal Digital Transistors

Specifications	Package	Part No.		R1 (kΩ)	R2 (kΩ)	Package							V _{CC} (V _{CE0}) (V)	I ₀ (I _c) (mA)	G _i (hFE)	
		PNP	NPN			VMT3	EMT3*1 Flat lead	EMT3*2	UMT3	SMT3	SST3	MPT3				
						■	■	■	■	■	■	■				
R1=R2 Potential Divider Type	100mA	DTA123E□ A	DTC123E□ A	2.2	2.2	•	•	•	•	•	-	-	50	100	20to	
		DTA143E□ A	DTC143E□ A	4.7	4.7	•	•	•	•	•	DTA only	-	50	100	20to	
		DTA114E□ A	DTC114E□ A	10	10	•	•	•	•	•	•	-	50	50	30to	
		DTA124E□ A	DTC124E□ A	22	22	•	•	•	•	•	•	-	50	30	56to	
		DTA144E□ A	DTC144E□ A	47	47	•	•	•	•	•	-	-	50	30	68to	
		DTA115E□ A	DTC115E□ A	100	100	•	•	•	•	•	-	-	50	20	82to	
	500mA	DTB113E□	DTD113E□	1	1	-	-	-	-	•	-	-	50	500	33to	
		DTB123E□	DTD123E□	2.2	2.2	-	-	-	-	•	-	-	50	500	39to	
		DTB143E□	DTD143E□	4.7	4.7	-	-	-	-	•	•	-	50	500	47to	
		DTB114E□	DTD114E□	10	10	-	-	-	-	•	-	-	50	500	56to	
		Formuting	-	DTC363E□	6.8	6.8	-	-	-	-	•	-	-	20	600	70to
		R1 ≠ R2 Leak Absorption Type	100mA	DTA113Z□ A	DTC113Z□ A	1	10	-	-	DTA only	•	•	-	-	50	100
DTA123Y□ A	DTC123Y□ A			2.2	10	-	-	•	•	•	-	-	50	100	33to	
DTA123J□ A	DTC123J□ A			2.2	47	•	•	•	•	•	-	-	50	100	80to	
DTA143X□ A	DTC143X□ A			4.7	10	•	•	•	•	•	-	-	50	100	30to	
DTA143Z□ A	DTC143Z□ A			4.7	47	•	•	•	•	•	DTC only	-	50	100	80to	
DTA114W□ A	DTC114W□ A			10	4.7	-	-	•	•	•	-	-	50	100	24to	
DTA114Y□ A	DTC114Y□ A			10	47	•	•	•	•	•	-	-	50	70	68to	
DTA124X□ A	DTC124X□ A			22	47	•	•	•	•	•	-	-	50	50	68to	
DTA144V□ A	DTC144V□ A			47	10	-	-	-	•	•	-	-	50	100	33to	
DTA144W□ A	DTC144W□ A			47	22	-	-	•	•	•	-	-	50	30	56to	
500mA	DTB122JK			DTD122JK	0.22	4.7	-	-	-	-	•	-	-	50	500	47to
	DTB113Z□			DTD113Z□	1	10	-	-	-	DTD only	•	-	-	50	500	56to
	DTB123Y□		DTD123Y□	2.2	10	-	-	-	-	•	DTB only	-	50	500	56to	
	DTB133H□		DTD133H□	3.3	10	-	-	-	-	•	-	-	50	500	80to	
	1A		-	DTDG23YP*2	2.2	10	-	-	-	-	•	-	60±10	1	300to	
	Type using R1 alone as input Resistor		100mA	DTA113TKA	-	1	None	-	-	-	-	•	-	-	50	100
-				DTC123TKA	2.2	None	-	-	-	-	•	-	-	50	100	100to600
DTA143T□ A				DTC143T□ A	4.7	None	•	•	•	•	•	-	-	50	100	100to600
DTA114T□ A		DTC114T□ A		10	None	•	•	•	•	•	DTC only	-	50	100	100to600	
DTA124T□ A		DTC124T□ A		22	None	•	•	•	•	•	-	-	50	100	100to600	
DTA144T□ A		DTC144T□ A		47	None	•	•	•	•	•	DTA only	-	50	100	100to600	
500mA		DTA115T□ A	DTC115T□ A	100	None	•	•	DTA only	•	•	-	-	50	100	100to600	
		DTA125T□ A	DTC125T□ A	200	None	-	-	-	•	•	-	-	50	100	100to600	
		DTB123TK	DTD123TK	2.2	None	-	-	-	-	•	-	-	40	500	100to600	
		DTB143T□	DTD143TK	4.7	None	-	-	-	-	•	-	-	40	500	100to600	
		DTB114TK	-	10	None	-	-	-	-	•	-	-	40	500	100to600	
		Formuting	-	DTC323T□	2.2	None	-	-	-	-	•	-	-	15	600	100to600
Type using R2 alone as Bleeder Resistor	100mA	DTA114G□ A	DTC114G□ A	None	10	-	-	-	DTA only	•	•	-	50	100	68to	
		DTA124G□ A	DTC124G□ A	None	22	-	-	-	-	•	DTC only	-	50	100	68to	
		DTA144G□ A	DTC144G□ A	None	47	-	-	-	DTA only	•	•	-	50	100	68to	
		DTA115G□ A	DTC115G□ A	None	100	-	-	-	-	•	•	-	50	100	68to	
		500mA	DTB114GK	DTD114GK	None	10	-	-	-	-	•	-	-	500	56to	
		1A	-	DTDG14GP*3	None	10	-	-	-	-	•	-	60±10	1	300to	

□ : Packaging designation symbol

Notes: [1] *1 When recommended lands are used. [2] *2 For internal circuit, refer to the data sheet. [3] EMT3, EMT3 Flat lead and VMT3 without suffix A. [4] PNP (-) symbol omitted.

Rohm Standard Digital Transistors
Available in VMT/EMT3/UMT3/SMT3/SST3 and MPT3 packages

NPNx2 Circuits

Configuration	Package		Equivalent circuit diagram	EMT5/6	UMT5/6	SMT5/6
	Application	Item		■	■	■
NPNx2	Potential divider type		EMG1	UMG1N	FMG1A	
			EMG2	UMG2N	FMG2A	
	Leak absorption type		EMG5	UMG5N	FMG5A	
			EMG8	UMG8N	FMG8A	
	Potential divider type		EMG9	UMG9N	FMG9A	
			-	UMG10N	-	
	Input resistor type		EMG11	UMG11N	FMG11A	
			EMG3	UMG3N	FMG3A	
			EMG4	UMG4N	FMG4A	
	Potential divider type		EMG6	UMG6N	FMG6A	
			EMH1	UMH1N	IMH1A	
	Leak absorption type		EMH2	UMH2N	IMH2A	
			EMH9	UMH9N	IMH9A	
	Potential divider type		EMH10	UMH10N	IMH10A	
			EMH11	UMH11N	IMH11A	
			-	UMH5N	IMH5A	
	Leak absorption type		EMH6	UMH6N	IMH6A	
			EMH3	UMH3N	IMH3A	
Input resistor type		EMH4	UMH4N	IMH4A		
		-	-	IMH15A		
		-	UMH7N	IMH7A		
		-	UMH8N	IMH8A		
		-	UMH14N	IMH14A		

