

Digital Transistors

Transistors with built-in resistors.

Available in various packages with a variety of built-in resistors to meet a wide range of needs.

●Product Designation

D	T	A	1	2	3	E	 	A
Part No.			Package code			Suffix (Except EM3)		
			Package	Code				
			EM3	E				
			UMT	U				
			SST	C				
			SMT	K				
			MPT	P				

EM3 of 100mA version has no suffix "A".
DTA123E of UMT package should be denoted as DTA123EUA.

EM3 • UMT • SST • SMT

●100mA Specifications

PNP Type Fig.1	NPN Type Fig.2	Resistance value		Package				V _{CC} (V)	I _O (mA)	G _I	V _O (V)	I _O (mA)
Part No.		R ₁ (k Ω)	R ₂ (k Ω)	EM3* Pd=150mW	UMT* Pd=200mW	SST Pd=200mW	SMT					
DTA123E□A	DTC123E□A	2.2	2.2	○	○	○	○	50	100	20~	5	20
DTA143E□A	DTC143E□A	4.7	4.7	○	○	○	○	50	100	20~	5	10
DTA114E□A	DTC114E□A	10	10	○	○	○	○	50	50	30~	5	5
DTA124E□A	DTC124E□A	22	22	○	○	○	○	50	30	56~	5	5
DTA144E□A	DTC144E□A	47	47	○	○	○	○	50	30	68~	5	5
DTA115E□A	DTC115E□A	100	100	○	○	○	○	50	20	82~	5	5
DTA113Z□A	DTC113Z□A	1.0	10	○	○	○	○	50	100	33~	5	5
DTA123Y□A	DTC123Y□A	2.2	10	○	○	○	○	50	100	33~	5	10
DTA143Y□A	DTC143Y□A	4.7	22	○	○	○	○	50	100	56~	5	5
DTA123J□A	DTC123J□A	2.2	47	○	○	○	○	50	100	80~	5	10
DTA143X□A	DTC143X□A	4.7	10	○	○	○	○	50	100	30~	5	10
DTA143Z□A	DTC143Z□A	4.7	47	○	○	○	○	50	100	80~	5	10
DTA114W□A	DTC114W□A	10	4.7	○	○	○	○	50	100	24~	5	10
DTA114Y□A	DTC114Y□A	10	47	○	○	○	○	50	70	68~	5	5
DTA124X□A	DTC124X□A	22	47	○	○	○	○	50	50	68~	5	5
*DTA115U□	*DTC115U□	100	10	—	○	○	○	50	20	27~	5	5
DTA144V□A	DTC144V□A	47	10	○	○	○	○	50	70	33~	5	5
DTA144W□A	DTC144W□A	47	22	○	○	○	○	50	30	56~	5	5
DTA1D3R□A	DTC1D3R□A	2.7	1.0	○	○	○	○	50	30	20~	5	30

□ : Package code E U C K

PNP Type Fig.3	NPN Type Fig.4	Resistance value		Package				V _{CE0} (V)	I _C (mA)	Min.	Typ.	h _{FE} Max.	V _{CE} (V)	I _C (mA)
Part No.		R ₁ (k Ω)	R ₂ (k Ω)	EM3* Pd=150mW	UMT* Pd=200mW	SST Pd=200mW	SMT							
DTA143T□A	DTC143T□A	4.7	—	○	○	○	○	50	100	100	250	800	5	1
DTA114T□A	DTC114T□A	10	—	○	○	○	○	50	100	100	250	600	5	1
DTA124T□A	DTC124T□A	22	—	○	○	○	○	50	100	100	250	600	5	1
DTA144T□A	DTC144T□A	47	—	○	○	○	○	50	100	100	250	600	5	1
DTA115T□A	DTC115T□A	100	—	○	○	○	○	50	100	100	250	600	5	1
*DTA125T□	*DTC125T□	200	—	—	○	○	○	50	100	100	250	600	5	1
DTA113T□A	—	1.0	—	○	○	○	○	50	100	100	250	600	5	1

□ : Package code E U C K

PNP Type Fig.5	NPN Type Fig.6	B-E Resistance		Package				V _{CE0} (V)	I _C (mA)	Min.	h _{FE} Max.	I _C (mA)
Part No.		R ₂ (k Ω)	R ₁ (k Ω)	EM3* Pd=150mW	UMT* Pd=200mW	SST Pd=200mW	SMT					
DTA114G□A	DTC114G□A	10	—	○	○	○	○	50	100	30	5	5
DTA124G□A	DTC124G□A	22	—	○	○	○	○	50	100	56	5	5
DTA144G□A	DTC144G□A	47	—	○	○	○	○	50	100	68	5	5
DTA115G□A	DTC115G□A	100	—	○	○	○	○	50	100	82	5	5

□ : Package code E U C K

- Notes : 1. *With recommended land pattern laid out.
2. Specification codes for PNP and NPN are omitted.
3. *Not for EM3.
4. EM3 has no suffix "A".

●Low ON output type

PNP Type Fig.1	NPN Type Fig.2	Resistance value		Package				V _{CC} (V)	I _O (mA)	G _I	V _O (V)	I _O (mA)	V _O (on) (V)	I _O (mA)	I _I (mA)
Part No.		R ₁ (k Ω)	R ₂ (k Ω)	EM3* Pd=150mW	UMT* Pd=200mW	SST Pd=200mW	SMT								
DTA214Y□	—	10	47	—	○	○	○	30	70	68	5	5	0.3	50	2.5

□ : Package code — U C K

SMT • MPT • SST

●500mA Specifications

PNP Type Fig.1	NPN Type Fig.2	Resistance value		V _{CC} (V)	I _C Max.* (mA)	G _I	V _O (V)	I _O (mA)	Package
Part No.		R ₁ (k Ω)	R ₂ (k Ω)						
DTB113E□	DTD113E□	1.0	1.0	50	500	33~	5	50	SMT • SST
DTB123E□	DTD123E□	2.2	2.2	50	500	39~	5	50	
DTB143E□	DTD143E□	4.7	4.7	50	500	47~	5	50	
DTB114E□	DTD114E□	10	10	50	500	56~	5	50	
DTB122J□	DTD122J□	0.22	4.7	50	500	47~	5	50	
DTB113Z□	DTD113Z□	1.0	10	50	500	56~	5	50	
DTB123Y□	DTD123Y□	2.2	10	50	500	56~	5	50	
DTB133H□	DTD133H□	3.3	10	50	500	56~	5	50	

PNP Type Fig.3	NPN Type Fig.4	Resistance value R ₁ (k Ω)	V _{CEO} (V)	I _C (mA)	Min.	Typ.	h _{FE} Max.	V _{CE} (V)	I _C (mA)	Package
Part No.										
DTB123T□	DTD123T□	2.2	40	500	100	250	600	5	50	SMT • SST
DTB143T□	DTD143T□	4.7	40	500	100	250	600	5	50	
DTB163T□	DTD163T□	6.8	40	500	100	250	600	5	50	
DTB114T□	DTD114T□	10	40	500	100	250	600	5	50	

PNP Type Fig.5	NPN Type Fig.6	BE Resistance R ₂ (k Ω)	V _{CEO} (V)	I _C (mA)	Min.	h _{FE} V _{CE} (V)	I _C (mA)	Package
Part No.								
DTB114G□	DTD114G□	10	50	500	56	5	100	SMT • SST

Notes : 1. *Characteristics of component transistors. 2. Specification codes for PNP and NPN are omitted.

●For Muting

PNP Type Fig.2	NPN Type Fig.2	Resistance value R ₁ (k Ω)	R ₂ (k Ω)	V _{CC} (V)	I _C Max.* (mA)	G _I	V _O (V)	I _O (mA)	R _{on} (Ω) Typ.	Package
Part No.										
-	DTC363E□	6.8	6.8	20	600	70~	5	50	1.0	SMT • SST

PNP Type Fig.4	NPN Type Fig.4	Resistance value R ₁ (k Ω)	V _{CEO} (V)	I _C (mA)	Min.	Typ.	h _{FE} Max.	V _{CE} (V)	I _C (mA)	R _{on} (Ω) Typ.	Package
Part No.											
-	DTC323T□	2.2	15	600	100	250	600	5	50	0.65	SMT • SST
-	DTC343T□	4.7	15	600	100	250	600	5	50	0.95	
-	DTC363T□	6.8	15	600	100	250	600	5	50	1.25	
-	DTC314T□	10	15	600	100	250	600	5	50	1.5	

Note : *Characteristics of component transistors.

●For Semipower

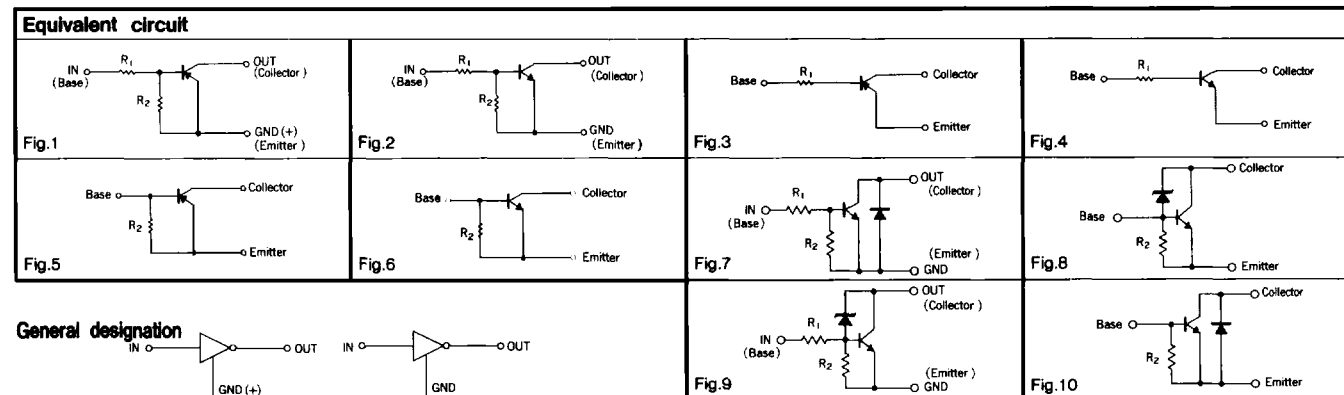
Fig.7 Part No.	Resistance value R ₁ (Ω)	R ₂ (k Ω)	V _{CC} (V)	I _C (A)	P _d * (W)	G _I	V _O (V)	I _O (A)	Package
DTDM12ZP	100	1	30	3	1.5	68~	2	0.5	MPT

Fig.8 Part No.	BE Resistance R ₂ (k Ω)	V _{CEO} (V)	I _C (A)	P _d * (W)	h _{FE}	V _{CE} (V)	I _C (A)	Package
DTDG14GP	10	60 $\pm$ 10	1	1.5	300~	2	0.5	MPT

Fig.9 Part No.	Resistance value R ₁ (k Ω)	R ₂ (k Ω)	V _{CC} (V)	I _O (A)	P _d * (W)	G _I	V _O (V)	I _O (A)	Package
DTDG23YP	2.2	10	60 $\pm$ 10	1	1.5	300~	2	0.5	MPT

Fig.10 Part No.	BE Resistance R ₂ (k Ω)	V _{CEO} (V)	I _C (A)	P _d * (W)	h _{FE}	V _{CE} (V)	I _C (A)	Package
DTDK14GP	10	10	2	2.0	120~560	1	0.5	MPT

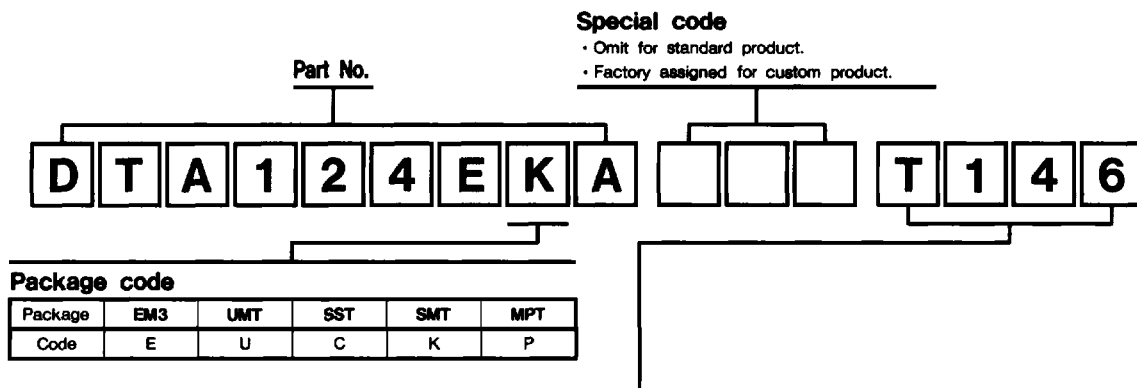
Notes : 1. *Characteristics of component transistors.
2. *Package mounted on ceramic 40 $\times$ 40 $\times$ 0.7mm



Digital Transistors

●Product Designation

- When ordering, specify the type.
- Check each code against the tables shown below.
- Fill a space with the next character.



Packaging

Package	Code	Packaging type	Packaging style	Direction	Quantity /Package (pcs)	Quantity /Unit (pcs)
EM3	TL	Taping	Embossed reel tape	1 Pin side on sprocket hole side	3,000	—
	TR			2 Pins side on sprocket hole side		
UMT	T106	Taping	Embossed reel tape	1 Pin side on sprocket hole side	3,000	—
	T107			2 Pins side on sprocket hole side		
SST	T116	Taping	Embossed reel tape	1 Pin side on sprocket hole side	3,000	—
	T117			2 Pins side on sprocket hole side		
SMT	T146	Taping	Embossed reel tape	1 Pin side on sprocket hole side	3,000	—
	T147			2 Pins side on sprocket hole side		
MPT	T100	Taping	Embossed reel tape	3 Pins side on sprocket hole side	1,000	—
	T101			Fin on sprocket hole side		

(Unit : mm)

Package	EM3	UMT	SST (U. S. /European SOT-23)
	Package code E	Package code U	Package code C
Dimensions	(1) Emitter (2) Base (3) Collector	(1) Emitter (2) Base (3) Collector	(1) Emitter (2) Base (3) Collector
Actual size	-	-	-
Enlarged (×3.0)			

(Unit : mm)

Package	SMT (SC-59/Japanese SOT-23)	MPT (SOT-89)
	Package code K	Package code P
Dimensions	TOP VIEW	TOP VIEW
Actual size		
Enlarged (×3.0)		

●Packaging Specifications

(Unit : mm)

Reel

Tape

EM3 · UMT · SST · SMT

Diagram of a reel cross-section showing dimensions: 2.0, 10.0 ± 1.5, 13.5 ± 0.5, 50.0 Min., 178.0 ± 2.0.

Diagram of a tape cross-section showing dimensions: 4.0 ± 0.1, 2.0 ± 0.05, 4.0 ± 0.1, Sprocket hole, 1.5 ± 0.1, 1.75 ± 0.1, 0.3 ± 0.1, 5.5 ± 0.2, 3.5 ± 0.05, 8.0 ± 0.2, 0 ~ 0.5, 0.5, B, A, C.

Package	Code
EM3	TR
UMT	T107
SST	T117
SMT	T147

Package	Code
EM3	TL
UMT	T106
SST	T116
SMT	T146

Package	Size		
	A	B	C
EM3	1.8 ± 0.1	1.8 ± 0.1	0.9 ± 0.2
UMT	2.2 ± 0.1	2.4 ± 0.1	1.15 ± 0.1
SST	3.15 ± 0.1	2.85 ± 0.1	1.4 ± 0.1
SMT	3.1 ± 0.1	3.2 ± 0.1	1.35 ± 0.1

MPT (SOT-89)	
