

FM0130-T0603**List**

List.....	1
Package outline.....	2
Features.....	2
Mechanical data.....	2
Maximum ratings and electrical characteristics	2
Rating and characteristic curves.....	3
Pinning information.....	4
Marking.....	4
Suggested solder pad layout.....	4
Packing information.....	5
Reel packing.....	6
Suggested thermal profiles for soldering processes.....	6

FM0130-T0603

**100mA Surface Mount Reverse
Voltage 30V**

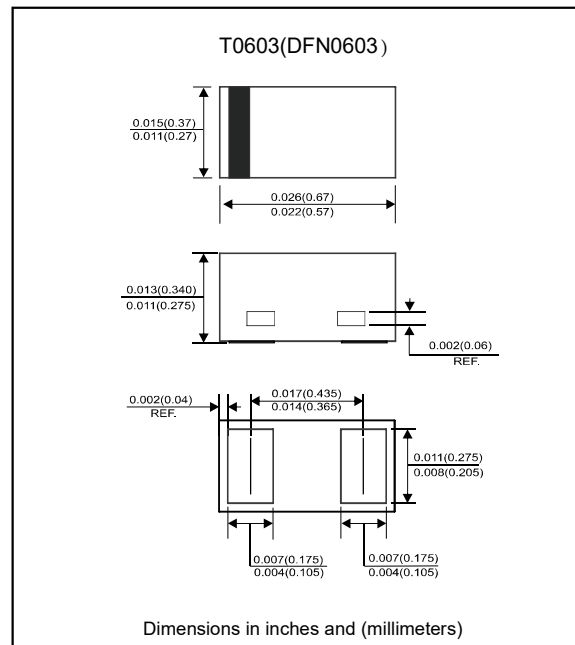
Features

- Low reverse current.
- Low forward voltage.
- Ultra small mold type.
- Lead-free parts meet RoHS requirements.
- Suffix "-H" indicates Halogen-free parts, ex.FM0130-T0603-H.

Mechanical data

- Epoxy:UL94-V0 rated flame retardant.
- Case : Molded Gold,T0603 (DFN0603)
- Terminal : Gold plated, Solder able per MIL-STD-750, Method 2026.
- Mounting Position : Any.
- Weight : 0.4 milligrams (approx.).

Package outline



Maximum ratings and electrical characteristics (At $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Reverse voltage	V_R	30	V
Average forward rectified current	I_O	100	mA
Non-repetitive peak forward surge current ($t=8.3\text{ms}$)	I_{FSM}	500	mA
Operating temperature range	T_J	$-40 \sim +150$	$^\circ\text{C}$
Storage temperature range	T_{STG}	$-40 \sim +150$	$^\circ\text{C}$

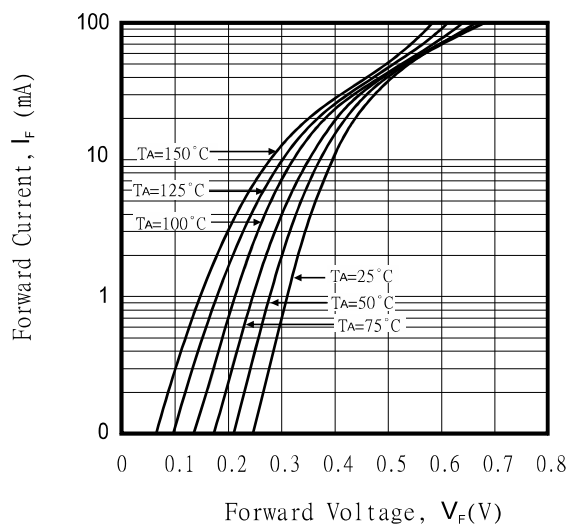
Electrical characteristics (At $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Until
Forward voltage	$I_F = 10\text{ mA}$	V_F			0.46	V
Reverse current	$V_R = 10\text{ V}$	I_R			0.30	μA

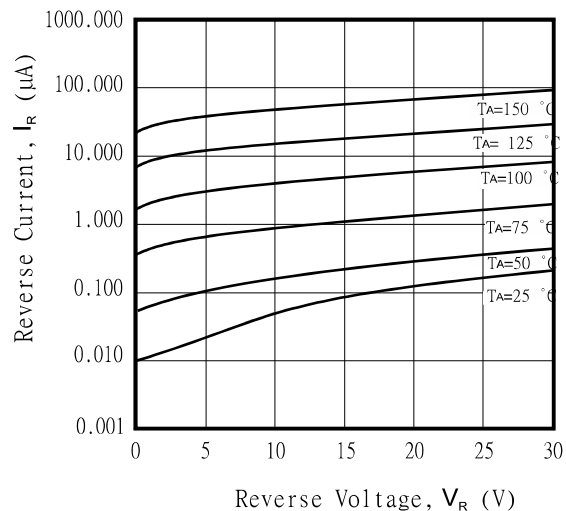
FM0130-T0603

Rating and characteristic curves

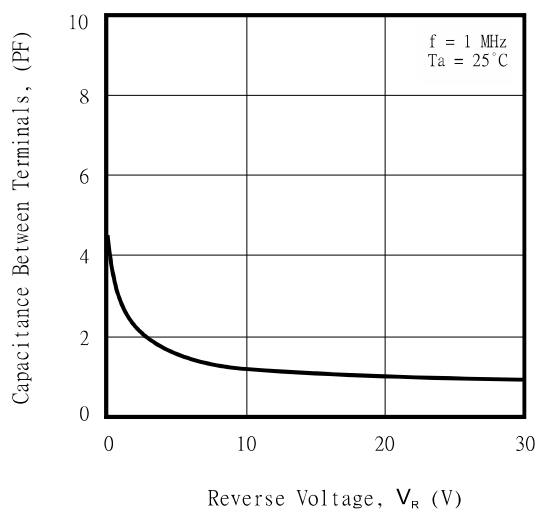
Forward Characteristics



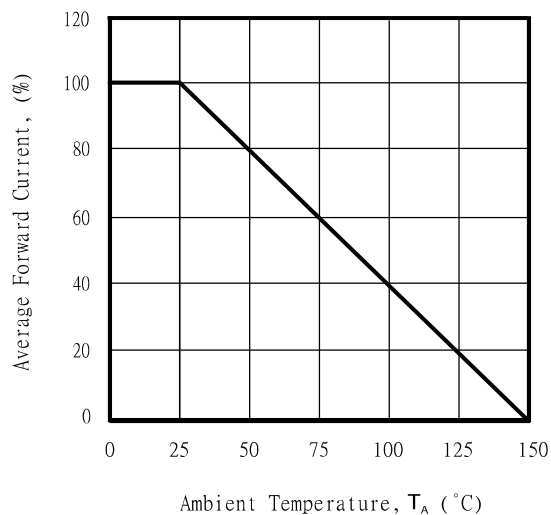
Reverse Characteristics



Capacitance Between Terminals Characteristics

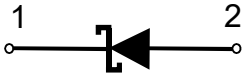


Current Derating Curve



FM0130-T0603

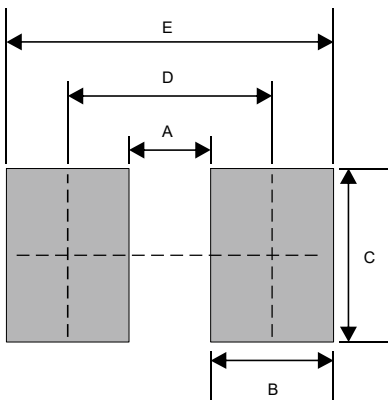
Pinning information

Pin	Simplified outline	Symbol
Pin1 Cathode Pin2 Anode		

Marking

Type number	Marking code
FM0130-T0603	A

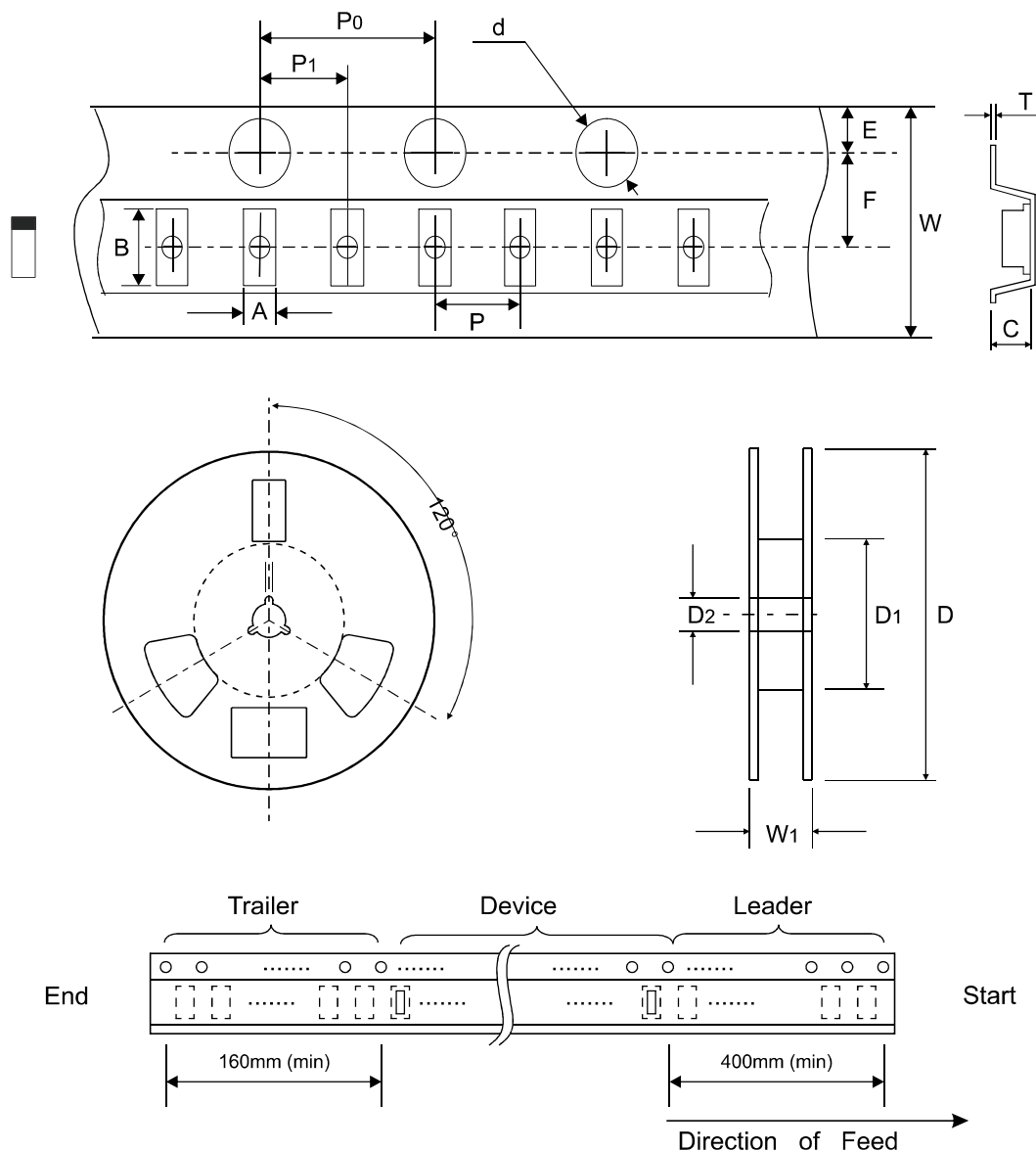
Suggested solder pad layout



T0603 (DFN0603)	A	B	C	D	E
	0.006 (0.16)	0.009 (0.24)	0.013 (0.34)	0.016 (0.40)	0.025 (0.64)

FM0130-T0603

Packing information



T0603 (DFN0603)	A	B	C	d	D	D1	D2
	0.017±0.001 (0.44±0.03)	0.029±0.001 (0.74±0.03)	0.016±0.001 (0.40±0.03)	0.059±0.004 (1.50±0.10)	7.008±0.039 (178.00±1.00)	2.362±0.020 (60.00±0.50)	0.531±0.008 (13.50±0.20)

T0603 (DFN0603)	E	F	P	P0	P1	T	W	W1
	0.069±0.004 (1.75±0.10)	0.138±0.002 (3.50±0.05)	0.079±0.002 (2.00±0.05)	0.157±0.004 (4.00±0.10)	0.049±0.002 (2.00±0.05)	0.008±0.001 (0.20±0.03)	0.315±0.012 - 0.004 (8.00±0.30) (- 0.10)	0.472±0.020 (12.00±0.50)

Dimensions in inches and (millimeters)

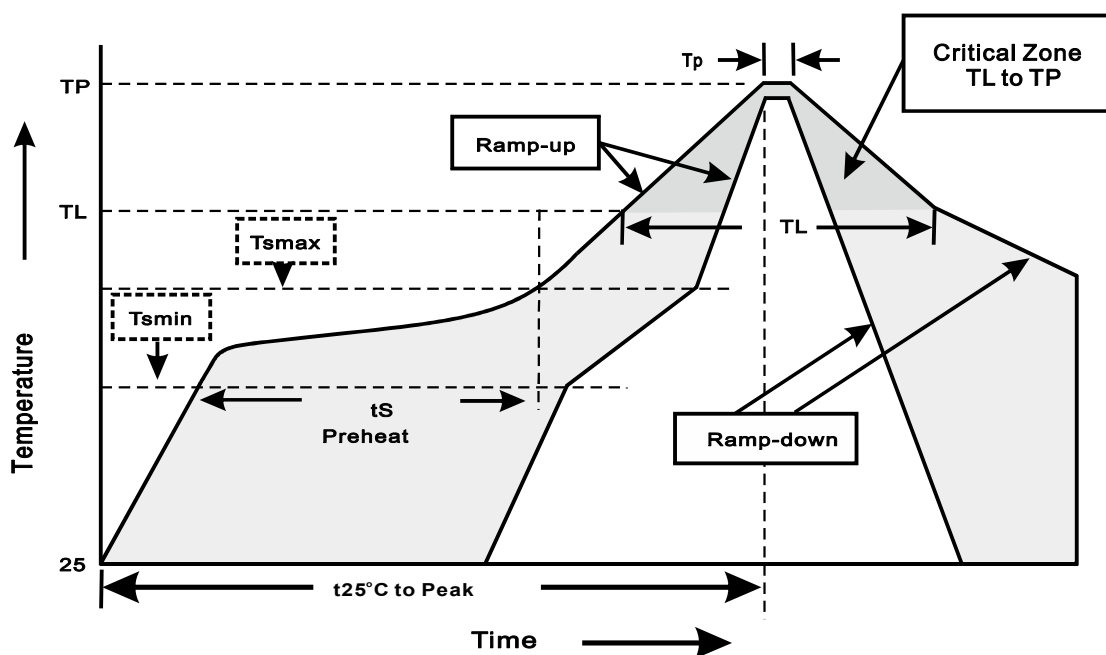
FM0130-T0603

Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
T0603 (DFN0603)	7"	10,000	4.0	100,000	183*123*183	178	382*257*387	800,000	2.6

Suggested thermal profiles for soldering processes

- 1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
- 2.Reflow soldering of surface-mount devices



3.Reflow soldering

Profile Feature	Soldering Condition
Average ramp-up rate(T _L to T _P)	<3°C/sec
Preheat -Temperature Min(T _{smin}) -Temperature Max(T _{smax}) -Time(min to max)(t _s)	150°C 200°C 60~120sec
T _{smax} to T _L -Ramp-upRate	<3°C/sec
Time maintained above: -Temperature(T _L) -Time(t _L)	217°C 60~260sec
Peak Temperature(T _P)	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(t _P)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes