



MC33FS6600M1ES (Active)

Safety power management IC, QFN56

[Data Sheet](#)

[Product Summary](#)

[Software & Tools](#)

Package [HVQFN56](#) plastic thermal enhanced very thin quad flat package; no leads; step-cut wettable flank, 56 terminals; 0.5 mm pitch, 8 mm x 8 mm x 0.85 mm body



[Buy Options](#)

[Operating Characteristics](#)

[Environmental Information](#)

[Quality Information](#)

[Shipping Information](#)

Buy Options

MC33FS6600M1ES

935378142557

Active

TRAY-Tray, Bakeable, Multiple in Drypack

Min. Package Quantity: 260

1K @ US



Available Distributors: MC33FS6600M1ES



MC33FS6600M1ESR2

935378142528

Active

REEL-Reel 13" Q2/T3 in Drypack

Min. Package Quantity: 4000

1K @ US



Available Distributors: MC33FS6600M1ESR2



Operating Characteristics

Parameter	Value
Supply voltage [min] (V)	2.7
Supply voltage [max] (V)	60
Supply Voltage [Typ] (V)	12
Output Current (A)	15
Number of Buck Regulators	4
Number of LDO	2
Regulators-Buck Switching	1 HV buck output 3.3V, 1 LV buck output 1.8V, 2 LV buck output 0.825V
	1 LV boost output 5.74V

Parameter	Value
Switching Frequency Vpre (kHz)	440
Switching Frequency LV Buck (MHz)	2
Number of Boost Regulators	1
Number of Channels	6
IQ (µA)	10
CAN PHY	0

Parameter	Value
LIN PHY	0
Ambient Operating Temperature (Min to Max) (°C)	125 to -40
Safety level	up to ASIL-C, up to ASIL-D
MCU Supported	S32R, S32V, TC2xxx, TC3xxx
Device Function	SMPS, linear regulators, safety power supply
Interface and Input Control	I2C / I2C, SPI / SPI
Additional Features - Analog	AMUX, Frequency Tuning, Sync
Additional Features - Security	1x Fail-safe output, 4 additional UV/OV inputs, Vcore UV/OV monitorings, Vddio UV/OV monitorings, challenger Watchdog
Junction Temperature (Min to Max) (°C)	150 to -40
Development Tools	KITFS85AEEVM, KITFS85FRDMEVM, KITFS85SKTEVM
Protection	current limit, overtemperature, overvoltage, undervoltage
Supply Voltage [Min to Max] (V)	60.0 to 2.7
Sample Exception Availability	Y

Environmental Information

Material Declaration	PbFree	EU RoHS	Halogen Free	RHF Indicator	REACH SVHC	Weight (mg)
MC33FS6600M1ES(935378142557)	Yes	Yes	Yes	D	REACH SVHC	191.4
MC33FS6600M1ESR2(935378142528)	Yes	Yes	Yes	D	REACH SVHC	191.4

Quality Information

Material Declaration	Safe Assure Functional Safety	Moisture Sensitivity Level (MSL)	Peak Package Body Temperature (PPT) (C°)	Maximum Time at Peak Temperatures (s)
		Lead Free Soldering	Lead Free Soldering	Lead Free Soldering
MC33FS6600M1ES (935378142557)	ISO 26262	3	260	40
MC33FS6600M1ESR2 (935378142528)	ISO 26262	3	260	40

Shipping Information

Part Number	Harmonized Tariff (US) Disclaimer	Export Control Classification Number (US)

MC33FS6600M1ES (935378142557)	854239	EAR99
MC33FS6600M1ESR2 (935378142528)	854239	EAR99

News 17 Jun 2020 | NXP Announces HoverGames Challenge 2: Help Drones Help Others [Read More](#)



[ABOUT NXP](#) [CAREERS](#) [INVESTORS](#) [MEDIA](#) [CONTACT](#) [SUBSCRIBE](#)



[Privacy](#) | [Terms of Use](#) | [Terms of Sale](#) | [Slavery and Human Trafficking Statement](#) | [Accessibility](#)

©2006-2020 NXP Semiconductors. All rights reserved.